FOGHORN

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WHAT'S INSIDE

WRITING TOOLS

3 **More WordStar Tips** by Jerry Wilson
Streamlining WS to suit your needs and other tips.

3 **Quick Start with WordStar** by Henry G.Belot
How to get down to business quickly in WordStar without having to eliminate the copyright notice.

4 **WordStar Columns Revisited**
by Lionel J. Soracco Jr and Allen D. Evans
Some follow ups to Dick Ezzard's article on columns by WordStar, covering making WS do most of the typing, resolving the version 3.3 problems and more.

MORE ABOUT CP/M

8 **Using CP/M User Areas** by David Bailey
How to use CP/M user areas to replace archive or library systems and hide confidential files.

8 **How Many Pages to Save?** by Henry G. Belot
An easy way using DDT to find out how many pages to save at the end of an edit session.

9 **An Easy Way to Format Disks**
from the Kaypro Users of Minneapolis
A simple, painless way to format disks.

LIBRARY NEWS

13 **Reading Disks & Disk Formats** by Jack Brown
Some information about **FOG***'s library disk formatting; how you can read* **FOG** *disks, and disks 088 - 092 are described.*

SOFTWARE REVIEWS

16 **PRINTMASTER** by Terry Bransdon
With this easy-to-learn graphics program you will be producing good quality artwork on your first attempt.

17 **The Proportional Spacing Installation for WordStar**
by Steven L. Bender
An inexpensive, very adaptable program that gives you true proportional spacing.

18 **PROFLOSS** by Jim Holmes
Just in time to help you do next year's taxes is the financial report generator, PROFLOSS.

18 **SUPERFILE for Indexing Literature Citations**
by Louise Schultz
Louise found this filing and retrieval program (modified for her specific needs) a very useful personal and small business system.

HARDWARE REVIEWS

20 **Commodore 128 Revisited** by Ron Grout
The upgraded CP/M system, some new additions, and some neat little public domain programs have really turned this computer into a CP/M gem.

22 **The INOVA-500 RAM-disk** by A. Hews McCann
The INOVA-500 RAM-disk has many useful features and comes with some great utility programs.

24 **Emergency Power Supplies** by James Bavendam
Some options if you are looking for an emergency power system to protect your computer gear.

ARTICLES

28 **Better "HELP" Messages from SC2 and dBASE II V2.4X** by Alan Chattaway
Using WordStar's non-document mode to change the help messages in SuperCalc2 and dBASE II version 2.4x.

28 **Government Publications** by Cecile Richter
Computers and computer science is one category covered by the US Government Printing Office available for public sale.

37 **Library File Transfers** by Jim Holmes
MEDIA MASTER and some useful publice domain programs made transferring many files from one format to another, as well as saving space, an easy task.

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MANAGING DATA

39 **The Usefulness of Scratch Fields in dBASE II** by Michael Gemignani
Scratch fields can help avoid having to modify the structure of a data base and can provide flexibility in exploring a data base's information.

40 **Printing Business Forms** by Mark Sevi
A suggestion for making things safer when printing business forms using dBASE II.

41 **dBASE Tips** · by Kaypro User Group members
dBASE tips from Kaypro user group members.

43 **dBASE II Offering** by Mark Sevi
Some suggested solutions to dBASE problems and issues raised in the April **FOGHORN**.

PROGRAMMER'S TOOLBOX

45 **CP/M Assembly Language** by Eric Meyer
Part two in a series on assembly language programming.

47 **LPRINT Statements** by Paul T. Jorgensen
Paul explains the IOBYTE for a serial printer if you are doing in-program switching of LPRINT statements in and out in MBASIC.

47 **Proving the Value of Pi** by Harry Pitcher
A BASIC program that proves the value of Pi as accurately as possible.

47 **Replace AUTOST.COM With a CP/M Auto-start** by Phil Pflager
An auto-start program that doesn't take up disk space.

RUN THE NUMERS

48 **SuperCalc2 Ideas and a Question** by Edward Birge
A rapid start for SuperCalc2.

49 **Lotus 123 to SuperCalc** by Garth Bennett
Transferring information in Lotus to SuperCalc.

INDEX

52 **An Index to Volume V.** by Gale Rhoades
A subject index for the October, 1985 through September, 1986 issues.

REGULAR FEATURES

31 CALENDAR
34 **FOG FONES**
52 **FOG** Supporters
63 **FOG** Member Merchandise
63 **FOG** Membership Information

WRITING TOOLS

If It's Relevant To Word Processing,
You Will Find It Here.

More WordStar Tips

by Jerry Wilson

WordStar as streamlined for an Osborne 1 with factory double density and 80 column upgrades as used with an Epson MX-80 III F/T printer.

This is a list of addresses and values contained in WordStar 2.26. Some of the values are customized to please my ideas.

I keep a copy of INSTALL and SETUP on the WS disk to make it convenient to make "adjustments" to the program.

```
ITHELP: 0360 00 Initial HELP LEVEL  (01, 02, 03) OFF
ITITOG: 0362 00 Start with INSERT  OFF
ITPOPN: 03D3 FF Omit PAGE NUMBERS
NITHLF: 0361 FF HELP message OFF
INITPF: 037E 06 .PO  PAGE OFFSET (Default 08)
        0386 00 ^OJ JUSTIFICATION OFF
        0388 00 ^OE SOFT HYPHEN ENTRY OFF
        0389 00 ^OH HYPHEN HELP  OFF
```

NOTE:I put 60 LINES on a page without needing to change TOP or BOTTOM MARGINS.

```
     OLD  NEW
* 0373  08 (03)              .MB default, 8 lines
                            (Changed to 3 lines)
* 0374  40 (18)              Bottom margin, 8*8 1/48's
```

NOTE: I set PAGE OFFSET to 6 and then adjusted the tractor feed of my printer so that I can print either SuperCalc or WordStar properly positioned on the page without having to readjust the paper feed.

```
ULCHR: 070C 5F ^PS UNDERLINE  (Use as a STRIKEOUT!)
SOCHR: 070B 9C ^PX STRIKEOUT
(This is a | which I use with ^ or v to make up or down
arrows)
^PF PHANTHOM SPACE for use with ^PX when there is no other
VISIBLE character to be printed.
```

NOTE: ^P↵ placed at end of the line will cause the next line to OVERSTRIKE.

Quick WordStar Tips

- To erase a mistake typed in after the prompt use ^H.
- ^R will repeat the last file used in command from the edit no file menu, such as *Name of File to Edit?*.
- When printing single sheets on the Epson, I use dot command .MT0 at the top of the file. This allows the paper to be positioned as you would on a conventional typewriter.
- If you want to insert a note in the file that you don't want to PRINT just type .. (two periods) or .ig at the start of that line.
- To show a dot command command in PRINT, precede it with a ^PS^PS.
- I placed a strip of tape on my printer to serve as a guide to position paper or envelopes. I use the printer to put addresses on envelopes. I have address lists in SuperCalc2 and WordStar.I also store my function key templates in SuperCalc2 and WS. Therefore, I can print any choice that I may need. I place a copy of function keys on the front of the envelope of the appropriate program disk. I keep that envelope propped up in front of me while the program is up. (Look at the number pad and lay out the function keys in a logical manner, e.g. 7 = ^QR [cursor to top of file] and 0 = ^QC [cursor to end of file], etc.).

* * * * * * *

Quick Start with WS

Henry G. Belot

This is not an item about modifying WordStar to speed up or eliminate the copyright notice. It's how to get down to business quickly without doing that.

First, if you're starting WordStar from the CP/M prompt, all you have to do is give it a filename at the same time. For example:

```
A>WS B:TESTFILE
```

That will take you directly to the file without displaying the copyright message or opening menu at all. You will be in the document mode unless you've previously modified WordStar to default to the nondocument mode.

If you're booting WordStar (after a reset or immediately after turning on your computer), then as soon as the notice begins to appear on the screen, type the first command you want to execute; for example, L to log to a new drive.

You'll know WordStar has accepted your command if you see the L or whatever appear briefly in the upper left corner of the screen. If it doesn't, give the command again. WordStar will begin processing your command immediately without going on to display the Main Menu.

So, if you're not hot to learn DDT, write assembly language programs, or that sort of stuff, a few keystrokes at the right time will accomplish about the same thing as modifying WordStar to eliminate or speed up the copyright notice.

* * * * * * *

Two Columns With WordStar Revisited

by Lionel J. Soracco Jr.
and Allen D. Evans

(By Soracco) In the March 1986 **FOGHORN** Dick Ezzard presented a clever way to produce two and three column output using WordStar 2.26 and MailMerge. The only drawback seemed to be the typing needed to set up the MM command file.

Creative Sloth to the rescue. Here are some ideas on how to make WordStar do most of the typing for you.

The .RV Lines

Enter the first line as:

```
.rv a0,a1,a2,a3,a4,a5,a6,a7,a8,a9
```

Use the block copy commands (^KB^KK^KC) to make five copies of this line. You now have six identical .rv lines. On the second of these lines, use ^QA to FIND "a", REPLACE it with "a1" using OPTION "10n".

Line 2 now reads:

```
.rv a10,a11,a12,a13,a14,a15,a16,a17,a18,a19
```

Convert the remaining lines to to the 20's, 30's, 40's and 50's.

In line 6 (a50 through a59) delete a55 through a59, leaving 55 variables (a0 to a54). These will read the 55 lines of column A.

Setting up the "b" variables is now a cinch. Block copy the 6 "a" lines, then use ^QA to convert all the a's to b's.

Output Formating

Assuming a two-column output, formating requires printing an "a" variable in column 1 and overprinting a "b" variable in the column 40, like this:

```
&a0& <^P^M>
                                        &b0&↵
```

^P^M causes the next line to overprint. 40 spaces are inserted before the &b0&. A similar entry must be made for each of the 55 variable pairs. By adapting the techiques described above for .rv, it doesn't take too long.

However, typing in all those spaces is

1 Tedious,
2. Prone to miscounting; and
3. Hard to revise.

Using .SV to set up a "space" variable solves all three problems.

Near the beginning of the MM file, enter this command:

.SVsp40↵, (here enter 40 spaces).

Using &sp40& each formatting line will now look like this:

```
&a0& <^P^M>
&sp40&&b0&↵
```

&sp40& inserts 40 spaces so be sure it's at the beginning of the line. If you decide to change to a different number of spaces, just .SV another space variable, then use ^QA to substitute it for sp40.

. . . and from Evans

Dick's excellent article on using MailMerge to automate the final two column production from a single column galley text is a wonderful idea. It removes the manual toil and tedium of ^KN block column moves or paste-up. However Dick experienced difficulties getting WordStar and Mailmerge versions 3.3 to work satisfactorily in producing two column page layouts.

My aim is to present a resolution of the version 3.3 problems and add a few thoughts on an orderly approach to preparing two column output.

Having gone through development of a 416 page document in two column format with a lot of integrated art, I am acutely aware of the production problems. With the use of Dick's MailMerge ideas and care in developing the original galley, the only paste-up required should be the art itself.

A minimum of three disk files are required; four, if the two column layout is sent to disk for final touchup before printing.

1. <u>Source File</u>:This is where your original document is created. It is left in a form that makes revision and editing easy.
2. <u>Data File</u>:This is the source file converted to a data file for MailMerge to use. The conversion is relatively rapid; most of your time is spent setting up the source file. For instance, I converted this article and wrote it to disk in two column format in 18 minutes, including making room for one piece of page-wide art.
3. <u>DBLCOL.FMT</u>:The MailMerge Command file listed at the end of this article. Once set up for a particular format, this file does not have to be reworked, except to change the .SV line to specify your data file.
4. <u>Layout File</u>:Output from DBLCOL.FMT directed to disk. Contains the document in two column format.

The Source File

Prepare your source file with WordStar 3.3 in (D)ocument mode. MailMerge data files are supposed to be prepared in (N)on-document mode to keep them clean of the eighth bit fiddling or other non-ASCII treatment WordStar uses in (D)ocument mode for editing and formatting purposes.

However, use of (D)ocument mode permits right justification and the use of automatic page breaks to help layout the galley columns. The directions here will ensure that no troublesome quirks arise from the use of (D)ocument mode.

For the source file, use any margins desired, justified or unjustified. When you edit and reformat, do not insert soft hyphens. Turn Hyphen-Help Off (toggle switch ^OH). Do not embed dot commands or control codes, e.g., ^P^S, ^P^B.

Do not use quotation marks (") within text. If you need them, use single apostrophe (') or some other character not otherwise used, e.g., \f0 or [. These can be later restored to proper quotation marks with a global find and replace after outputting to disk in double column format.

Save this file to use as your source file for major editing and rewriting. Nothing has been done to it to handicap later reworking of the basic text.

The Data File

Copy the edited source file to a new file with a .DTA extension. Open the .DTA file in (D)ocument mode. This will become your data file for MailMerge; do not do any rewriting or major editing to it. If that becomes necessary, go back to the source file. The process from here on is final production and goes pretty fast.

Set right margin to final single column width desired, e.g., 34. Turn justification On (toggle ^OJ); Hyphen-Help Off. Use .PL, .MT, and .MB to fix number of lines of text on a page to that desired for final printout.

Do a ^QQ^B to quickly reformat the text into a right justified galley column.

If there is a need for the final product to include single or double column art or full width text, the necessary space in the form of blank lines should be inserted into the data file at this point. That may require some careful planning and counting of lines, but with the top and bottom margins set so the page breaks come at the desired final column length, it isn't a difficult job.

Review text for awkwardness at page ends and in justification. For instance, widows or broken tables at page ends; large gaps of space in justifying lines. Adjust by minor rewriting where possible (you'll probably improve and tighten up the writing).

If all else fails, turn on hyphen help and insert soft hyphens to improve justification spacing. These will be replaced with hard hyphens in the next step. Revisit to make sure your art and wide text are still in the right places.

Replace any soft hyphens that have been injected with the following procedure:

- ^OE to turn on soft hyphen;
- ^QF-↵↵to find the first soft hyphen in the text;
- ^OE to turn off soft hyphen;
- Replace the soft hyphen with a *hard hyphen;*
- ^L to find the next soft hyphen; replace; and repeat ^L, replace soft hyphen, to end of file.
  Insert quotation marks around every line: do a global ^QA find and replace: *Find?*: ^N *Replace with?*: "^N" *Options?*: GN. Add a quotation mark at the beginning of the first line of text in the file. Go to end of file and check that the last line is enclosed in quotation marks and delete any lone quotation mark at the very end.

MailMerge gets confused by null lines. After the insertion of quotation marks, all blank lines in your text will have two marks side-by-side. Do a global find "" and replace with " " to get rid of the nulls.

Also, check the last line of each galley page. That line will be the last data read by MailMerge in a .RV statement, and MailMerge doesn't like an empty line. Insert a #, or some other character otherwise unused in your text, within the quotation marks in those empty last lines.

Delete the page formatting dot commands, if present. Save the data file. It is now ready to print out in double column.

The MailMerge Command File

Prepare a double column printout command document using WordStar 3.3 (D)ocument mode. A listing for the file, set up for a 53 line page, is appended at the end of this article. It is a modification of Dick's listing to accommodate WordStar 3.3.

There are three tricks to making Dick's command file work:

- First, in locating the &b(i)& variables use Tab to move over to the desired column location. Do not "space" over.
- Second, set print time line formatting to off, i.e., insert the dot command: .PF OFF.
- Third, make the list for reading a variable (.RV) one long line, instead of breaking it into a more convenient series of separate .RV statements. AND add one more variable than you need. For instance, if you want a 53 line final printout, then the a column variable read command would be: .RV a1,a2,a3,.........a51,a52,a53,a54↵
  (This dot command, of course, starts in the first column). There would be a similar list in one long line for the b column variable read. The MailMerge limit for a single line is 240 characters.

I don't understand why the 3.3 version needs the single list and the extra variable. However, I found the last variable in a .RV list was apparently being filled with a lone ^N. Consequently, when the read list was broken into several .RV statements, the printout would have a blank line inserted at the position where the last line in a list should have been.

That, of course, threw off the variable reading so that the last line from the previous list would appear in the next list. I suspect it relates to the manner in which the .DTA file is constructed.

Print Time

Use MailMerge to run the command file to output your .DTA file in double column format. If you need to replace ersatz quotation marks with real ones, embed print commands, or add full width text in the spaces provided in Step 3, then direct the MailMerge output to a disk file.

Do your final polishing to that file and print from it. Some care will be needed in working with the file because the ^P^M's inserted for line overprint remain in the disk file. It will not look like your final paper print.

The screen will appear to be double spaced with the right column staggered down one line from the left column. The clue that all is OK lies in screen column 80, where WordStar puts a - instead of a < to indicate a line continuation.

If you need real quotation marks in your final text, do a global search to find the ersatz symbol used and replace it with ".

Then, if you had blank lines at galley column page ends, use a global search to replace those with a null. To do that, simply enter ↵ in response to the *Replace With?* prompt of the ^QA sequence.

You should now have a nice looking double column layout.

MM Command File Listing for Use with WS 3.3

The listing below will layout a single galley file of up to 34 characters width in double column pages of 53 lines. The data file, named L3.DTA here, should be previously prepared by the method described above. Enter the name for your data file by editing the .SV DATAFILE, filename line. A message as to which file is being laid out will be displayed on screen during the MailMerge operation in order to remind the user that a data file name change may be required. To create this file, use D(ocument) mode, set right margin at 200; clear all tabs; set one tab at column 39.

```
 ..DBLCOL.FMT. A merge file to layout a single galley file in
.. double column pages.  Full credit to Dick Ezzard.
.. "Columns by WordStar". FOGHORN. March. 1986. page 45
.. Input:  Prepared galley text file in single column
.. up to 34 characters in width.
..Output: Two columns of 53 lines per page at positions
.. 1 and 39
.SV DATAFILE. L3.DTA
.DM Printing &DATAFILE& in double columns.
.DM If wrong data file. stop print. and change this file
.DM at the .SV line
.DF &DATAFILE&
.PF OFF
..Output Page formatted for disk file
..Adjust for output directly to printer:NT 7. MB 6. PO 6
.PL 53
.NT 0
.NB 0
.PO 0
.RV a1,a2,a3,........a52,a53,a54
    (All one line)
.RV b1,b2,b3,........b52,b53,b54
     (All one line)
..Note: each "a" variable typed at left margin. then line
.. ended with ^P^M to make overprint line.  Do not use carriage
.. return.  USE tab to move to column 39 to type "b" variable.
.. then end line with carriage return.
&a1&
                                     &b1& &a2&
                                     &b2& &a3&
                                     &b3&
 .
                                      .
 .
                                      .
 .
                                      .  &a52&
                                     &b52& &a53&
                                     &b53&
```

* * * * * * *

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MORE ABOUT CP/M

CP/M HAS LOTS OF TRICKS UP ITS SLEEVES!

Using CP/M User Areas

by David Bailey

This article describes how to use CP/M user areas to replace archive or library systems and hide confidential files.

- Use NSWEEP to tag related files.
- Then Move them to destination B1, B2, B3,...,B15.
  Files stored in user areas 1 to 15 will normally be hidden from view. This can provide a security benefit as well as organizational and convenience benefits. For example, accounting files can be hidden from view and stored in user areas 1 to 12 depending on the month.

Those of you who have Drive C (or some other RAM-disk) may find it convenient to put certain files into different user areas on the back of your WordStar floppy disk.

For example, you may want to put into user 0 certain CP/M utilities that you may occasionally want to run directly from the floppy drive (eg., NSWEEP, FINDBAD, RECOVER, SD, FK or SUPERSET (alias K), SETUP, NC, COPY, SYSGEN, SORTDIR).

Then, you may want to put into user 1 your spelling checker and associated utilities (eg., SPELL.COM, SPELL.DIC, DICT.DIC, and SORT.COM) where they can be conveniently wild card tagged and moved to RAM for use.

You may also want to put miscellaneous utilities or .DOC files in user area 2, etc.

To use files stored in user areas 1 to 15:

- Load NSWEEP
- Log into the user area of interest (e.g. LB1)
- Wildcard tag all files of interest, (eg W*.* or W*.COM, or whatever) and
- Then move them to user area 0 of your destination drive (e.g., MA0↵).

To review disk directories, use SD (**FOG**–CPM/015).

With SD, you can look at each user area one at a time, or all of them at once. For example:

- SD B1: (to look at user area 1 of Drive B); or
- SD B1:*.DAT (to look at all .DAT files on B1); or
- SD B: $A (to display all user areas of Drive B); or
- SD B: $A8PF (to display directories for all user areas on Drive B in four column format, with output to printer, and to disk file named SD.DIR. If this file already exists, the new directory will be appended).

* * * * * * *

How Many Pages to Save?

by Henry G. Belot

There have been a few articles in past issues of the **FOGHORN** on how to calculate how many "pages" to save when using DDT and similar HEX code editors. I still think that by far the simplest method is the one described by Jim Nelden on page 31 of the June, 1984 issue. If you don't have a copy handy, here it is again.

Before you edit the file, issue a STAT command, like this:

```
A>STAT B:FILENAME.COM↵
```

CP/M returns with something like this:

```
Rec  Bytes  Ext  Acc
123  16k    R/W  B:FILENAME.COM
A>
```

The key is the first number, the number of records. Simply divide it by two and, if necessary, round it up to the next whole number. In this case, dividing by two gives you 62.5, so the magic number is 63, the next whole number. That's how many pages you will have to save at the end of your edit session.

And that's it. No mucking around with HEX numbers at all! The only trick is to remember to do it.

If you do like to work with HEX, the *CBASIC User Guide* by Osborne, Eubanks, and McNiff (McGraw Hill) includes a table in the back for converting HEX to decimal. That simplifies using some of the other techniques that have been described in past **FOGHORN**s.

The book is the authoritative reference to CBASIC, so if you expect to use that language even a little, you should own it.

CBASIC, like the new implementations of BASIC that are now appearing for the 16-bit and 32-bit machines, allows you to write structured programs which are much easier to understand and document than older versions of the language. Expect the structured BASIC dialects to take over the field in the next several years.

* * * * * * *

An Easy Way To Format Disks

from the Kaypro Users of Minneapolis

One of the most boring, mindless tasks associated with using your computer is "making disks", i.e., using your CP/M disk to format a disk for your use.

You must do this or your machine can't read the disk. There is a way to automate this using the Public Domain program EX14 (**FOG-CPM.010**). This is an enhancement of the SUBMIT program that comes with CP/M.

FIRST open a file with Perfect Writer or the non document mode of Wordstar. You should name the file "F.SUB". Type the following on the LEFT edge of the screen. Be sure to end each line with a carriage return.

```
COPY^|↵
B^|↵
E^|↵
PIP↵
B:=A:PIP.COM↵
B:=A:SD.COM↵
B:=A:SWEEP.COM↵
```

Save the file.

NOTE: We're never sure how some of the symbols will print on (in this case) a Juki, so remember (on a Kaypro) that ^ equals the Upper Case 6, and | equals the Upper Case of the key immediately below the DEL key.

(The files after "PIP" are the files that will appear on all your formatted disks. The three above are the ones we use, but you can use any programs you want to have on all of your disks.)

NEXT Put EX14 and F.SUB, plus the programs you included in F.SUB, on your CP/M disk. Then rename "EX14" to "E".

To use this, place your CP/M disk in Drive A, and a blank, unformatted disk (or a used one you want to reuse) in Drive B.

Hit E (space) F↵, and away it will go! It will format your disk and place on the formatted disk all the utility programs you have indicated in the Submit file . . . while you go get a cup of coffee!

We usually format a new box of disks at one time, just to have them ready for use.

* * * * * * *

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Nantucket

The Source for CP/M-80

Turn the page for more!

We're glad we decided to stick with CP/M users. *Thoughtline*, the only outline processor that works in both CP/M-80 and MS-DOS receives hundreds of glowing letters and rave reviews. And Peter McWilliams, writing in his nationally syndicated column, pays us the ultimate compliment, calling us "The Sears of CP/M software" and describing our catalog as "thick and delicious!" Please write or call for a copy; We'll continue to stick with you. Meanwhile, here's a peek at our latest goodies:

Thoughtline - it's your software

We have received literally hundreds of letters raving about the ease of use, familiar WordStar-like syntax, and powerful features of *Thoughtline*. Well, we have just released Version 2.1 and now—with the ability to read and write WordStar/NewWord files without losing the outline structure—this great program is even better. (Even more improvements are in the works, but you can buy with confidence now, because two upgrades are free!) It boils down to this: If you use your computer to write with, and you don't already own *Thoughtline*, get it. If you don't absolutely love it, we'll take it back. Simple as that.

What is He Talking About ?

Sorry - we forgot there are folks who don't know what *Thoughtline* is. *Thoughtline* is an outline processor—a way of putting your ideas quickly onto your computer, then organizing them and expanding them—even creating the finished article, computer program, book, term paper or complex project.

```
+1Things to Do
  +prepare for board meeting
    -get budget figures ready
    +Profit/Loss figures look good
      -Lead off with this
  +Pick up flowers for Jennifer
    -she likes roses
  +Tell people about thoughtline
    +Richard Elms
      -an attorney would love this
    +Betsy
      -great for her screenplay
  +November Calendar
    -17
    +18
      -dentist appointment @9:30
      +Lunch w/Fred
        -bring hawaii brochures
    -20
```

Thoughtline is more than just a way to create an outline. Working from your outline is simple - just continue typing on a topic and *Thoughtline* switches into a word processor - expand ideas to your hearts content. To return to the outline form touch ^UD and your paragraphs tuck back into the topic heading.

Sure Looks Familiar

Thoughtline even looks like WordStar. That's our way of saying if you know WordStar you know *Thoughtline* too. The cursor diamond works just like you would expect, as do most of the other editing keys. In fact, when you are editing free text, it's just like you were working with WordStar. (Except *Thoughtline* is a little bit faster.)

You're Still the Boss

Don't like outlines? No problem. Type a list of things you want to organize. Name the "boxes" you need to toss similar things like errands, office work, etc - and number each box using the binsort feature. Tag your list - that's a one, that's a four, etc. Your random list is sorted to the categories you've created. You'd rather prioritize? No problem, built right in.

Structured Text Importing

This hot new feature allows any WordStar or ASCII file to be imported right into outline format. You will be able to move between *Thoughtline* and WordStar without losing a beat (or a thought!) We know you'll love *Thoughtline*. Order today. Our 90 day guarantee lets you experience this indispensible tool without risk.

Thoughtline - $69.95

What our Users Say about Thoughtline:

Thoughtline is, without doubt, the best new CP/M program in years. - *Robert Sawyer, Freelance writer*

..by the way, Thoughtline is just right - excellent balance in design - *Dick Runke, United Virginia Bank*

I am writing about your great program Thoughtline. I only wish I had had this forty years ago. My writing would have been better and I would have done more of it. I wrote church school articles for 25 years, scores of articles and a dozen books, but with this I could have done better - *Kenneth Jones, Academic Dean, Mid-America Bible College.*

Hands down the most useful, powerful, fun to use and flashy piece of software I've encountered ... I caught on to it within half an hour of busting the wrapper and went straight to heaven - *Paul Estrem*

To the basic software I use frequently (WordStar, Supercalc II) I now add without reservation Thoughtline, as being equally useful and equally significant - *Fred Schultze*

...and as for Thoughtline - WOW! I bought KAMAS and waded through Adam Trent's obtuse mental gyrations until I was literally dizzy ...I sent for KAMA's little brother OutThink. Again, another great disappointment ...then comes Thoughtline. Now I can outline my books and articles just as I had hoped to when I bought KAMAS and later OutThink - *Dr. Eric Skousen, Writer*

Presto - you asked for it

Presto is the answer to a great many of our customers requests. So many of you said you wanted SideKick for CP/M machines.

Presto hides in memory while you run other programs. With a press of the activation key you can have a calculator, notepad or calendar. The calendar even has an alarm feature on computers with real time clocks. Your computer beeps and displays a message on the appointed day and time.

Presto - $39.95

Twist and Shout - By popular request

Print Sideways! This software lets your dot matrix printer print huge spreadsheets or text without cutting and pasting. As a bonus, **Twist and Shout** prints banners with eight inch letters in two fonts. Virtually all computers & printers supported.

Twist and Shout - $34.95

Make Your PC CP/M-80 Compatible

Acceler8/16 installs in IBM-PCs or compatibles and lets you run nearly all your CP/M-80 software on them. The V-20 chip included also speeds up your PC by about 15 percent in the MS-DOS mode. CP/M-80 emulation is equivalent to a 3.5 Mhz CP/M machine, similar to the machine you presently use.

Acceler8/16 also includes Media Master Plus which allows your PC to read and write to a variety of CP/M-80 disk formats. The terminal emulator duplicates Osborne, Kaypro and H/Z89. A bargain and an amazing product.

Acceler8/16 - $99.95

503-245-8102 - *Spite Software*

Great Modem Deal

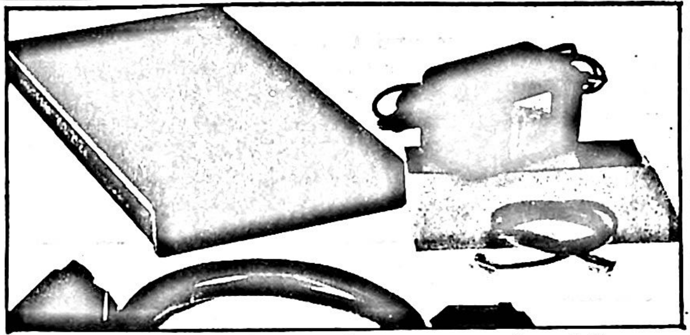
Modems for Everybody

We want all our customers to have modems, because soon you're going to need one. There is a multitude of electronic services accessible via modem, and more are coming on-line all the time. We operate an bulletin board customers can access at any time for no charge. FOG operates a nationwide network free to members. And that's just the beginning.

They're Like Bellybuttons

When we first began selling our Turbolink 1200 modem it was a breakthough - the first high quality 1200 baud modem under $300. We added top-notch telcom software and a quality cable and sold it for $279.95 - a great deal. Now modems under $200 are as common as bellybuttons.

We've tested a number of them. Some of them were (as you might expect) good only as doorstops. Others lacked features or Hayes compatibility. But we could see the writing on the wall.



Note the high-quality metal case construction - full complement of LED's - completely compatible with Hayes.

So, we went back to manufacturers we knew built good modems and renegotiated—hard. Finally, we reached agreement. But to get the price we wanted, while keeping the quality we always had, we had to promise to purchase enormous quantities. That means we must sell these modems at rock bottom prices to move them.

Our new *TURBOLINK 1200* is just **$179.95!** For that price you get a completely Hayes compatible modem with speaker and a full complement of indicator LEDs, a 12 month warranty, telephone connector cable and power supply.

Instant Use

Don't buy it that way, though. For only $20.00 more, you get our Instant Use package which includes a high quality shielded cable to connect the modem to your computer, excellent telecommunications software (The Microlink II - a $99.00 value), access to our bulletin board, $25 free time on BRS/BRKTHRU the online information service, 30 days free use of the Official Airlines Guide discount flight booking system, and of course, the Turbolink 1200 modem. This whole package is just **$199.95!** No one can beat it!

At $20 additional for cable, software and access packages you've probably guessed we are not making anything on the package deal. But there's a reason for it. Telecommunications is complex. Lots of things can go wrong if you don't have a well mated setup. With our package success is virtually guaranteed.

Turbolink 1200 - $179.95
Instant Use Pak - $199.95

Biz-Letters

I hate writing letters. They are time consuming and they can be a terrible embarrassment. Many times I have reread my copy of a letter after it was mailed and found unclear phrasing, grammatical errors and clumsy construction. I don't want people thinking I'm an illiterate boob. Biz-Letters solves the problem.

This is a collection of over 100 professionally crafted, carefully proofed letters on disk. They include request and inquiry replies, reminders, goodwill notes, dunns, congratulations - the whole gamut of business correspondence. A quick reference in the documentation helps select the proper letter.

Use the letters alone or with a mailmerge data file. Used alone you enter the appropriate data from the keyboard. It is automatically entered into the proper spot in the letter as it prints.

Of course you can modify letters or add to the set. Use our designs as a template and add anything you want.

A slick front-end program lets you pre-install all your company or personal data (Name, return address, etc.). Make a business copy and a personal copy for real convenience.

Book Deal - Buy Biz letters alone for **$39.95** or get it with the one book we recommend without qualification - *Getting the most from WordStar and MailMerge (reular price - $19.95)* for just **$49.95**

Biz-Letters - $39.95
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MS-DOS anyone?

If you are considering an MS-DOS computer, but the daunting prospect of buying all new software and relearning has you down **We have the answer.** Our PC-XT compatible Clones come equipped with 640k, AT style keyboard, Monitor card, and the drive configuration you want. We also have an AT clone. The big difference is that our XT compatibles come with the Hitachi V-20 chip installed and Acceler8/16 bundled in - which means your new **PC XT compatible will run CP/M-80 software, and run it fifty percent faster than in your present machine.** Your new clone will also read and write to your CP/M-80 disks thanks to Media Master + included free.

Furthermore, **our clones come with bundled MS-DOS Software.** The delay time associated with advertising dictates that we get this ad out while we are still negotiating with software distributors. We are not certain if all the folks we are talking to will participate. But we know for sure we will include MS-DOS versions of ***Thoughtline***, Writer's Aide, a note card style database program, and a special version of SweepOP - our memory resident NewSweep work-alike. There will be other software as well, and it will be software you are familiar with.
With our package you can build onto the base of useful software skills you already have, and add new MS-DOS software capabilities - without having to relearn everything.

These machines are extensively tested and come with a one year warranty with service stations across the country.

Prices vary with the configuration you choose and market variations. Call us for the best deal.

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SuperDex - Indexes Your Documents
The cleanest, fastest, most versatile indexer around. Creates an indexing dictionary from marked words and phrases - you can add directly to the index. Shows each occurance in context for your selection or automatically creates the entire index. Even does "see also" referencing or multi level indexing. Format of the printed index is up to you. Chigago book of Style is the default format. **SuperDex - $59.95**

Writer's Aide - 7 Essential Writing Utilities For WordStar or NewWord - run from menu or alone.
WRDCOUNT - Counts words, lines, characters per word.
NUMBER - Line -numbered documents in any format.
COMBINE-Links WordStar files.
MATCHUP - Finds unpaired print control characters.
CRYPT - Makes files unreadable without password.
WS/ASCII - Turns Ascii files to WordStar, WS to Ascii.
WORDFREQ - Lists number of occurances of words in a text by frequency or alpha order. **Writer's Aide - $39.95**

MM•Sort - Mailmerge File Sorting
Turns Mailmerge into a powerful database system. Sorts Mailmerge data files on any field, using character, numeric or boolean data types. Sorts in ascending or descending order. Includes on-screen help, fast data verification and interface to dBase or other database managers. **MM•Sort - $29.95**

MathMate - A Super Calculator
Adds powerful calculator functions to your computer - both scientific and business, plus functions calculators don't offer, like Matrix operations, creating amortization and depreciation tables etc. Asks for data in sentance form. No formulas to remember. 14 digit precision **Mathmate - $39.95**

Reading Professor - Read Faster and Better
A great program - enhances your reading skill better than any expensive course. Developed in consultation with reading researchers at Cal State. Will double or triple your skim speed and overcome bad habits. Also helps maximize concentration for difficult reading. **Reading Professor - $59.95**

Libraries for Reading Professor
Added libraries to make reading professor useful and interesting.
JUNIOR HIGH - 9th grade level stories by popular writers.
COLLEGE - Best for comprehension training
PROFESSIONAL - "In search of Excellence" and other useful management readings. **Libraries - $15.95 Each**

Mychess - Great Chess Game
Nine skill levels. a great skill enhancer and great graphics. Also a great trainer at higher levels of play, with tournament timer, ability to set up board for chess problems or classic games. Mychess knows over 850 openings. Save games for later or dump to printer. **Mychess - $39.95**

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Airport requires fast, three dimensional thinking to win - or just keep your job. You are an air traffic controller and your screen is the radar scope. Guide traffic from single props to jumbo jets. Written with the aid of a professional air traffic controller, airport brings realism and grown up action to the world of video games. Just the break you need. **Airport - $19.95**

Professional Writing Tools

Footnote - Add Professionalism and Style
Automatically references and formats your footnotes. Maintains and updates position and cross references even after major edits. Fast and elegant. **$59.95**

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Compares citations in your text to your master file and automatically creates a bibliography. Combine with NOTEBOOK for a powerful reference system. **$59.95**

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We have been using Spell a long time. It's quick and simple and it will fit on a SSDD disk with WordStar or NewWord. Four times faster than competing checkers. **$49.95**

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Numbers paragraphs, sections, subsections in any of seven styles. Maintains cross references and renumbers after edits. A great time saver for complex projects. **$59.95**

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LIBRARY NEWS

Reading Disks & Disk Formats

by Jack Brown

One thing to keep in mind when ordering disks is that we normally ship on Osborne DD disk format from our stock inventory. We can ship on most DD formats, but since we don't inventory other formats, there will be a longer delay before your delivery can be made.

If your computer doesn't read Osborne DD format, commercial programs such as Uniform (from Micro Solutions, 125 S. Fourth St, Dekalb IL 60115, (815) 756-3421) or Media Master (Intersecting Concepts, 4573 Heatherglen Ct, Moorpark CA 93021, (805) 529-5073) are available that allow you to read the Osborne format.

Kaypro owners can use the MFDISK program included with their machines to read Osborne DD disks, or you can order **FOG–CPM**.037 in Kaypro format if you don't have the MFDISK or SETDISK program for your computer. Public domain versions for the Kaypro 2, 4, and 10 are on that disk.

Contact the office to see if we can format a disk for you if you have a machine with a real oddball disk format.

Those of you requiring disks in single density format, please double the disk prices since you will require two disks instead of one.

All library disks are available directly from the **FOG** office for $4 each in quantities up to 9, or $3 each for 10 or more at a time (8" disks are $5 each – any quantity). These prices include first class postage in North America.

Disks also are available from your local group, usually at no cost to you if you bring your machine and disks and do the copying yourself.

Below are descriptions of **FOG–CPM**.088 – 092.

Filename	Description
-FOG/CPM.088:	dBase II Accounting Program from dBase manual
//CPM088.DOC:	(additional files are on FOG/CPM.089)
/JUL/86 . :	Simplistic-but uses almost all dBase commands
ACCNTREE.DOC:	Tree structure diagram of program files
ACCOUNT .DOC:	Overview of accounting system
ACCOUNTS.CMD:	
ACNTCOM .DOC:	Explains function of all command files
ACNTFILE.DOC:	Lists structure of all data files
ACNTINST.DOC:	How to set up and run the accounting system
ACNTSTRU.DOC:	How the files relate to each other
ACNTUSES.DOC:	Which files are used by which .CMD files
ACTRENDX.CMD:	
BILLED .FRM:	
BILLINGS.DBF:	
CHECKFIL.DBF:	
CHECKSTU.CMD:	
CONSTANT.MEM:	
COSTBASE.DBF:	
COSTBILL.CMD:	
COSTMENU.CMD:	
COSTTIME.CMD:	
COSTUPDA.CMD:	
DATETEST.CMD:	
DEPMENU .CMD:	
DEPOSITS.CMD:	
DEPOSITS.DBF:	
DEPPRINT.CMD:	
DEPTRANS.CMD:	
FINDBILL.CMD:	
GETDATE .CMD:	
HOLD81 .DBF:	
HOLD84 .DBF:	
INSERTS .DBF:	
INVMENU .CMD:	
INVOICES.CMD:	
INVOICES.DBF:	
//CPM089.DOC:	(additional prgms are on FOG/CPM.088)
/JUL/86 . :	(for use with accounting system)
AVE .CMD:	Finds the average and variance of a given field
BLANK .CMD:	Adds blank fields to bottom of file
DATE .CMD:	Used by accounting on FOG/CPM.088
DBDIR .ASM:	Demonstrates how to call an assembler routine
DBDIR .CMD:	from dBASE II, and helps explain this poorly
DBDIR .COM:	documented command
DBDIR .DOC:	
DBSC .CMD:	Converts dBASE II .DBF files to SC 1.12 files
DBUTILS .DOC:	Info on various utility prgms on this disk
DELDUP .CMD:	Marks duplicate records for deletion
IOMENU .CMD:	Used by accounting on FOG/CPM.088
IOPOST .CMD:	Used by accounting on FOG/CPM.088
IOREVIEW.CMD:	Used by accounting on FOG/CPM.088
JOBCOSTS.CMD:	Used by accounting on FOG/CPM.088
JOBCOSTS.FRM:	Used by accounting on FOG/CPM.088
JOBSINDX.CMD:	Used by accounting on FOG/CPM.088
JULIAN .CMD:	Writes Julian date for every occurence in a file
LSQ .CMD:	Calculates best fit line by least squares method
MAX .CMD:	Finds maximum value of a field
MEDIA .FRM:	Used by accounting on FOG/CPM.088
MIN .CMD:	Finds minimum value in numeric or character field
NLR .CMD:	Calculates best fit with two free variables
NAMETEST.CMD:	Used by accounting on FOG/CPM.088
PAYBILLS.CMD:	Used by accounting on FOG/CPM.088
PAYEMPS .CMD:	Used by accounting on FOG/CPM.088
PAYFIND .CMD:	Used by accounting on FOG/CPM.088
PAYMENU .CMD:	Used by accounting on FOG/CPM.088
PAYROLL .CMD:	Used by accounting on FOG/CPM.088
PERSONNE.DBF:	Used by accounting on FOG/CPM.088
PLOT .CMD:	Allows you to make X-Y plots on an Epson printer
PLOT0 .CMD:	from dBASE
PLOT1 .CMD:	Used by PLOT.CMD
PLOT2 .CMD:	Used by PLOT.CMD
POSTFILE.DBF:	Used by accounting on FOG/CPM.088
PRINTOUT.CMD:	Used by accounting on FOG/CPM.088
REPORTME.CMD:	Used by accounting on FOG/CPM.088
REVHDR .CMD:	Used by accounting on FOG/CPM.088
REVIEW .CMD:	Used by accounting on FOG/CPM.088
REVMRGN .CMD:	Used by accounting on FOG/CPM.088
SALESTAX.CMD:	Used by accounting on FOG/CPM.088
SUPPLIER.DBF:	Used by accounting on FOG/CPM.088
TEST .DBF:	Used to test DBUTILS.DOC
TIMECALC.CMD:	Used by accounting on FOG/CPM.088
USETAX .CMD:	Used by accounting on FOG/CPM.088
XSMOOTH .CMD:	Exponential smoothing of one variable
XSMOOTH .DBF:	Used by XSMOOTH.CMD

Filename	Description
-FOG/CPM.090:	dBASE II Programs
//CPM090.DOC:	
/JUL/86 . :	
CANCEL .CMD:	Used with CHECKS.CMD
CHECKS .CMD:	A checkbook management system
CHECKS .DBF:	Used with CHECKS.CMD
CHECKS .MEM:	Used with CHECKS.CMD
CHECKS .NDX:	Used with CHECKS.CMD

```
DBFRED37.CMD: Allows you to append with some fields being
DBFRED37.DOC: defaulted in each append operation (tokenized file)
E/BEGIN .CMD: EASY POST MAIL LIST SYSTEM
E/BONES .CMD: A menu driven program to keep a name and address
E/CHANGE.CMD: list, and output information for use with
E/DATA  .DBF: WordStar and MailMerge
E/ENTER .CMD: Used with EASYPOST
E/EOF   .CMD: Used with EASYPOST
E/FIND  .CMD: Used with EASYPOST
E/INPUT .CMD: Used with EASYPOST
E/PADDRS.CMD: Used with EASYPOST
E/PHONE .CMD: Used with EASYPOST
E/PRINT .CMD: Used with EASYPOST
E/REORG .CMD: Used with EASYPOST
EASYPOST.DOC: Introduction to EASYPOST
EMF     .DOC: A menu driven program to do invoicing, inventory,
ENTER   .CMD: and purchase orders for a small publishing business
FILL    .CMD: Used with EMF
FORM10  .FMT: Used with DBFRED37
FORMGEN .CMD: Generates .FMT forms for DBFRED37 (tokenized file)
INDCAT  .NDX: Used with EMF
INDLAST .NDX: Used with EMF
INDNUM  .NDX: Used with EMF
INDPO   .NDX: Used with EMF
INVENTOR.CMD: Used with EMF
INVENTOR.FRM: Used with EMF
INVOICE .DBF: Used with EMF
ITEM    .CMD: Used with EMF
ITEM    .DBF: Used with EMF
LABEL   .CMD: Used with EMF
MARK    .CMD: Used with EMF
MEMBERS .DBF: Used with EMF
MENU    .CMD: EMF menu entry program
MENU2   .CMD: Used with EMF
NAMES   .DBF:
NEWENTER.CMD: Used with CHECKS.CMD
NUM     .MEM:
PO      .CMD: Used with EMF
PO      .DBF: Used with EMF
POMEM   .MEM: Used with EMF
POMENU  .CMD: Used with EMF
SAMPLE  .DBF: Used with DBFRED37
SAVE370 .MEM: Used with DBFRED37
SETUP   .CMD: Used with EMF
SIGN    .CMD: Used with EMF
TEST    .CMD: Used with EMF
UND/MEMB.DOC: How to use print codes to underline headings
UNDLINES.CMD: in dBASE, complete with sample .CMD file
UNPAID  .FRM: Used with EMF
VEND    .FRM: Used with EMF
VENDOR  .DBF: Used with EMF
```

```
Filename      Description
-FOG/CPM.091: dBASE II programs
//CPM091.DOC: Portable Companion and FOGHORN index (to Sept/83)
/JUL/86 .   :
ARCHIVE .CMD: Used with DB-CHECK
ARHELP  .CMD: Used with DB-CHECK
ARTICLES.DBF: A compilation of interesting articles in the
ARTICLES.DOC: Portable Companion and FOGHORN, 1982-1983
ARTICLES.TXT: Wordstar version of .DBF file
BACKUP  .CMD: Used with DB-CHECK
BAL     .CMD: Used with DB-CHECK
BUSINESS.DBF: Used with DB-CHECK
BUSINESS.NDX: Used with DB-CHECK
CANCEL  .CMD: Used with DB-CHECK
CATA    .CMD: Used with DB-CHECK
CHECKNO .FRM: Used with DB-CHECK
CHREPORT.FRM: Used with DB-CHECK
DB-CHECK.DOC: Checkbook register for personal & business checks
DCANCEL .CMD: Used with DB-CHECK
DEPO    .FRM: Used with DB-CHECK
DEPOSIT .CMD: Used with DB-CHECK
EDIT    .CMD: Used with PHONEDEX
ENTER   .CMD: Used with PHONEDEX
FB0     .DOC: FONE BOOK - an electronic phone list
FB1     .CMD: FONE BOOK - an electronic phone list
FB2     .CMD: FONE BOOK - an electronic phone list
FB3     .CMD: FONE BOOK - an electronic phone list
FB4     .CMD: FONE BOOK - an electronic phone list
FB5     .CMD: FONE BOOK - an electronic phone list
FB6     .CMD: FONE BOOK - an electronic phone list
FB7     .CMD: FONE BOOK - an electronic phone list
FB8     .FRM: FONE BOOK - an electronic phone list
FBSTRT  .   : FONE BOOK - electronic phone list in dBase II
HELP    .CMD: Used with DB-CHECK
IND     .CMD: Used with DB-CHECK
INDBUSNO.NDX: Used with DB-CHECK
INDPERNO.NDX: Used with DB-CHECK
KEY     .NDX: Used with PHONEDEX
KEYWORD .CMD: Used with PHONEDEX
LAST    .NDX: Used with PHONEDEX
MENU    .CMD: DB-CHECK dBase II checkbook program
NAMES   .DBF: Used with PHONEDEX
OSSIGN  .CMD: Used with DB-CHECK(Osborne graphics signon screen)
PERSONAL.DBF: Used with DB-CHECK
PERSONAL.NDX: Used with DB-CHECK
PHONEDEX.CMD: ROLODEX type program in dBase II
PHONEDEX.TXT: Documentation and introduction
PRINT   .CMD: Used with PHONEDEX
PROMPTS .MEM: Used with DB-CHECK
PURGE   .CMD: Used with DB-CHECK
REGSIGN .CMD: Used with DB-CHECK
REPORT  .CMD: Used with DB-CHECK
RESTORE .CMD: Used with DB-CHECK
SETUP   .CMD: Used with DB-CHECK
YEAR    .CMD: Used with DB-CHECK
```

```
Filename      Description
-FOG/CPM.092  Printer Picture Files
//CPM092.DOC:
/JUL/86 .   :
ABRAHAM .PQC: All these files will print various pictures
ANDYCAP .PQC: on your printer when you use the TYPE command
BARBIE  .PQC: and use ^P to send output to the printer, or
BASSETT .PQC: use the PIP command to send the file to
BEFCAKE .CQL: the printer (PIP LST:=<filename>
BULLDOG .PQC:
CAT     .PQC: All files are SQUEEZED to save space, and
CHARLIE .PQC: must be unsqueezed with NSWEEP or USQ
CINDY   .PQC: before you can print them. You may need
CLOWN   .PQC: to experiment with print density and lines
DONALD  .PQC: per inch on your printer for best results.
DRAGON  .PQC:
EAGLE   .PQC:
FERRARI .PQC:
GROUCHO .PQC:
HONEY   .PQC:                                         PINUP86 .CQL
HORNCAL .PQC:                                         PINUPCAL. 8Q
JANE    .PQC:                                         PLUTO   .PQC
JESSIE  .PQC:                                         RAQUEL  .PQC
JFK     .PQC:                                         SAILING .PQC
KELLY   .PQC:                                         SALTGIRL.PQC
LINUS   .PQC:                                         SAM     .PQC
LUCY    .PQC:                                         SHIP    .PQC
MISSY   .PQC:                                         SHIPCAL . 8Q
MONA    .PQC:                                         SNOOPY  .PQC
MORGANNA.PQC:                                         SNOOPY1 .PQC
NIXON   .PQC:                                         SNOOPY2 .PQC
NIXON1  .PQC:                                         SNOOPY4 .PQC
NUDE83  .CQL                                          SNOOPY83.PQC
NUDE84CL.PQC:                                         SNOOPY86.PQC
NUDE85  .PQC:                                         TEKCAL85.PQC
PANTHER .PQC:                                         TIGER   .PQC
PINUP   .PQC:                                         TWEETY  .PQC
PINUP1  .PQC:                                         XMAS    .PQC
```

* * * * * * *

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- DISKDIF tells what programs are on one disk but not on another.
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Okidata ml193P printer	$595
Star Gemini 10X printer	$249
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Serial ABC switchbox (3-way)	$99
Parallel AB switchbox (2-way)	$79
Parallel ABC switchbox (3-way)	$109
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SOFTWARE REVIEWS

PRINTMASTER

by Terry Bransdon

A plus for Printmaster and for the patience of a computer illiterate like me is that from the moment I load the floppies into my Kaypro 2X, things start to happen.

At the A prompt, the PM command brings the main menu onto the screen. Then it's all menu driven. The choices are there, clearly giving an immediate option of designing a greeting card, a sign, stationary, a calendar, or a banner.

I soon find the first fault: the instructions are for MS-DOS. However, on closer examination there is a note from the manufacturer (which I subsequently find amongst discarded packaging), that warns the enclosed "user's guide" is for the IBM version of Printmaster.

For the CP/M version, there are some adjustments to make: such as substituting CP/M when reading PC-DOS or MS-DOS. This is no great hassle. More irritating is the fact that the arrow keys on my Kaypro fail to move the cursor.

By now this should have been rectified as Unison World, Inc., which manufactures the program, advises that future versions of Printmaster (those after July 1986) will remedy it by asking you to: "hit the UP arrow", "hit the DOWN arrow" etc, so Printmaster can read the value return and use that value to determine which way to move the cursor.

Meantime, the note from Unison advises me to use ^H to move the cursor left, ^L to move it right, ^J for down and ^K for up.

I find that in Printmaster's single column menus, ^H or ^K moves the cursor up and ^J or ^L moves it down. That really is all I need to know to get into this program and to start producing. Refinements can wait until later.

I choose the first item on the list: a greeting card. The prompts are so simple that within a couple of minutes my own individualized first greeting card is off my little Epson RX80 printer.

Hardly a masterpiece, but despite room for substantial design improvement, it is something tangible produced with minimal labor. Following experimentation, the sign, stationary, calendar, and banner programs all prove equally simple and a heck of a lot of fun.

One disappointment for me is that the graphics editor on the menu is unavailable for Printmaster's CP/M version.

Another is that graphics are not displayed on my screen and I have to keep referring to the manual to see what I'm choosing. But that's a hardware problem. The same applies to fonts, but there is a lot of fun in waiting to see whether what you expect to come out does.

Included in the Printmaster package are 111 pre-designed graphics and 11 patterns, eight type fonts and 11 border designs.

Supplied separately to operate with Printmaster is Art Gallery I which enlarges my number of graphic and pattern designs from the standard 122 by 140 to a total of 262 designs.

Included are graphics covering most uses I initially can think of, enabling creation – as the guide says – of "personalized party invitations, theater handbills, one-of-a-kind greeting cards, window ad cards and even a newsletter masthead".

Now available, but not with the program I tried, is Art Gallery II, which adds another 140 new graphics, broadening even further options. But don't forget with the whole program you'll have four floppies and there's a lot of changing disks when your imagination is really active. A hard disk overcomes this concern.

Placing the graphics as I said before, is really a case of trial and error. You have a choice of small, medium or large graphics.

When you use the small or medium size, you can alternate the number of images per line. With small-only graphics you can use a tiled layout.

Finally, available with any size graphics, is the custom layout, which enables you, subject to the limitations of the program, to put the graphics where you want them – for example in each corner, or in a row across the top, in a diagonal pattern, or in two rows.

The Printmaster type fonts – crude forms given the graphics capability of the hardware – are adequate. There are the following typefaces: Deville, Scribe, Office, Hampton, Times, Western, Utopia and Computer.

Each can be printed solid, in outline or in three-D, which makes for a lot of variety. I find limitations in controlling their size and number of characters, frequently being told there is no more space for that character. But overall, despite these limitations, the results are pleasing.

Borders prove varied enough to match my initial imagination with the variety including a thin black line, a thick one, a nouveau design, ants, a street full of cars, footprints and lace. There's a lot you can do with those.

I guess the main feature about this program I like is that it's a lot of fun. And right from the start.

Don't think it's going to get you the results of graphics-designed hardware and the far more superior desktop software programs.

But it compares favorably with similar basic graphics programs and for the outlay of $49.95 for the Printmaster CP/M version you're into graphics and personalized design on your computer. Add $39.95 for Art Gallery I, and $29.95 for Art Gallery II, and your machine learns quite a few new tricks.

Printmaster is available from Unison World Inc. PO Box 3056, Berkeley CA 94703.

* * * * * * *

The Proportional Spacing Installation for WordStar

by Steven L. Bender

The Proportional Spacing Installation for WordStar: Chaucer Software CP/M Version Reviewed on a KAYPRO 10 using a STAR - Powertype Printer

This is one of several Proportional Spacing programs available, for users of WordStar 3.3. While the WordStar programs have had an "undocumented" proportional spacing capability for years, it really doesn't work properly and is therefore an "undocumented" capability.

True Proportional Spacing allows more space for letters such as "m" and "w" than for "i", "l" or "r". It requires a printer capable of responding to software selectable micro or proportional spacing for character pitch.

This pitch movement capability is usually in multiples of 1/120th of an inch, while line movement is usually in increments of 1/48ths of an inch.

Printers having such printing capabilities include: the Kaypro/Juki, Star Powertype, Brother, C. Itoh, Diablo, NEC, etc.

MicroPro never fixed the code present in your WordStar program for proportional spacing; but Chaucer Software did.

To use it, you run their PS.COM file once. It produces another WordStar "COM" file with another name. It doesn't alter your original, but makes many corrections in the "new" .COM file.

You can use this revised file instead of the regular WordStar, or you can use the WS R command to "run" the other Proportional Spacing version when you wish to print something using proportional spacing.

This only works on files produced in WordStar's Document Mode. The only requirement is that you use the ^B command in formatting every line in each of your paragraphs as this provides the codes for microjustification.

The results vary depending on your printer, your printwheel and character font, but it is true proportional spacing, and it's very impressive.

This revised WordStar file is just like any other. It can be used instead of your regular file, but by embedding a ^P (and a few other standard dot commands, if you prefer to alter the "look") in the file to be printed, you can get a printout that is VERY close to typeset appearance.

It can have either a right margin that is ragged, or a right margin that is justified. There is a menu in the Chaucer PS.COM program, that allows you to choose a 10 CPI Printwheel, 12 CPI Printwheel, Script, etc.

Yes; this one really works. Since the revised program responds to all the normal WordStar "dot" commands, (look them up) you can control the inter-character spacing, turn proportional spacing on and off, alter the height between lines, page offset, margins, etc.

The price of the program ia a mere $19.95. Need I say more? The CP/M version came with a 24 page manual which was done using this program on a Juki 6100 printer.

➡

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It serves at a tutorial and explains almost everything in the first 20 pages. It is quite informative and provides many helpful hints, and examples. The last four pages are sample printouts.

The only assumption the people at Chaucer made, is that your original WordStar "COM" file was set up properly for the features of your printer. Since the output can be varied (almost infinitely), there is room to alter and "play around". Reinstalling your original WordStar may alter the appearance of your finished documents. Once you get "that" typeset effect, you may never want to go back to plain printing again!

Oh yes, this neat little program is also available for the PC-DOS / MS-DOS versions of WordStar too. Chaucer Software can be contacted at P.O. Box 2308 Princeton, N.J. 08540.

* * * * * * *

PROFLOSS

by Jim Holmes

Just in time for NEXT year's taxes is PROFLOSS, a financial report generator in three "speeds" – it's simple, it works as advertised and it's inexpensive.

I don't worry about keeping track of my assets most of the year. All I have to do is stick my hand in my pocket. Comes tax time, I'm shuffling about for the receipts I know I saved, and looking for old checks.

PROFLOSS to the rescue! It costs $19.95 and generates financial reports based on income/expense classes in a 14-column format. Besides the headings (five income, 26 deductions) and monthly "breakdowns", the program calculates deduction categories as a percentage of total income!

PROFLOSS "reads" a six field, comma delimited data base that you create using FILEBASE (EWDP Software, Inc. markets both products), dBASE II or any other data manager or spreadsheet (like SuperCalc) that can output a comma delimited file.

There must be six fields, and three are definable by the user. Date, amount and category are "musts". Other obvious choices would be check #, recipient and reason.

A standard set of expense categories roughly conforming to IRS Tax Schedule C is provided on the distribution disk. These are simple to change should you require it.

No printer configuration is needed. Output is on two pages, in full size (10-pitch) lettering. When these are joined, side to side, they form the complete 12-month span.

Though any data base or spreadsheet outputting comma delimited files may be used to create the data file, FILEBASE users have the advantage of accepting data from files with fewer (or more than) six fields, then easily restructuring the incoming data for six fields in the proper order.

PROFLOSS is available for most CP/M computers, and for PC- DOS/MS/DOS as well. It may be ordered direct from:

EWDP Software, Inc.
PO Box 40283
Indianapolis, IN 46340
Phone (317) 872-8799

* * * * * * *

Using SUPERFILE for Indexing Literature Citations

by Louise Schultz

In my work, I had the opportunity to develop a system for providing literature citations in the field of biology, on floppy disks to those who had access to micros. (A "literature citation" is usually the title, author/s name/s, source publication, pagination, etc., for a paper, book, report, etc.)

We thought we should be able to recommend a filing and retrieval system to disk customers and began testing programs running under either Appledos or CP/M on the assumption that those operating systems would be most prevalent among our expected academic users.

The criteria for a suitable program depended in large part on the characteristics of our data and the way we indexed such citations for existing printed and mainframe tape products. Because those products cover the entire field of the life sciences, the indexing vocabulary is on the order of 750,000 words, two-thirds of which are the names of organisms.

So a program that assumed one would be able to characterize desired paper/s in a given file in any one or more of a total vocabulary of 255 words would not suffice. In fact, with the unpredictability of the emergence of potential words in the indexing vocabulary, each paper bears an average of 20-22 indexing assignments.

The resulting index field is generally too large to be practical in a data base type program – because "average" means anything from about seven to whatever fills the 3600 byte field in the mainframe system.

We settled on SUPERFILE, which the creators (FYI, Inc. of Austin Texas) modified to our contract specifications as BIOSUPERFILE.

However, these comments apply to the original program because the modification is available only to subscribers to the data disks from BIOSIS, 2100 Arch St., Philadelphia PA 19103.

SUPERFILE also was upgraded and released by FYI as SUPERFILE 2000 (I think) at three or four times the price of the original and also for MS-DOS systems. (SUPERFILE was said to have been written in a language for which only FYI has the compiler.)

Rules for creating records are very few: a record is a stream which begins with an asterisk followed by an upper case C; must have an index field that begins with an asterisk followed by an upper case K; have at least one entry; and be terminated by an asterisk followed by an upper case E.

Each index entry is separated from the next by a slash. Index entries may embed spaces and any character except an asterisk or a slash. Optionally, a single asterisk can be used within the record prior to the *K to offer suppression or inclusion of selected data.

Records can be created in any word processor or editor that puts a return/line feed at the end of a line and that generates ASCII files.

As an example: if this piece were to be a SUPERFILE record and that the user would want to be able to scan titles of items responding to a search on filing systems. The record could be as scanty as:

```
*CSUPERFILE *K FILING SYSTEMS *E
```

or, more comprehensively as:

```
*CSUPERFILE by Louise Schultz *28745
Portsmouth Dr. Sun City CA 92381 *K FILING
SYSTEMS/ BIOLOGY LITERATURE/
INDEXING/ CP-M/ *E
```

The notion of the optional asterisk is implemented in the print routines (screen or printer) to output the entire record, or to restrict output of either the portion between the single asterisk and either the *K or the *E.

In terms of spacing, line lengths, and tabs, the format of the output follows that of the input.

If one expected to display records in alphabetical order of the author's last name, the record would have to be keyed as:

```
*CSchultz, Louise, SUPERFILE
*28745 Portsmouth Dr., Sun City CA 92381
*K FILING SYSTEMS/ BIOLOGY LITERATURE/
INDEXING/ CP-M/ *E
```

To yield a listing of all clients in a given zip or area code, that index element must be terminated by a slash, as:

```
*CSchultz, Louise, 28745 Portsmouth Dr. Sun City
*K CA/ 92381/ *E
```

If the records are being created by a word processor that uses the convention of a leading period in position one of a line that is not to be printed, elements of the searchable record can be included in an otherwise routine document such as a letter or invoice.

Two files are generated from the input data: a set of index entries (the vocabulary), which can be printed out for reference, and a file of pointers to records indexed on each entry. You can append records and the additional vocabulary and pointers also are appended.

Maintenance is simple except that it is the user's problem to keep vocabulary entries consistent if search statements are to be easy. Using Filing System in one record and Filing Systems in another can make typing the search statement tedious as the program cannot use a truncated form of the desired phrase.

The program's structure allows the file to be as long as will fit on 255 disks, providing no one record exceeds one disk and that the index and vocabulary files are both on a single disk.

When new portions of the file are indexed, the system asks if the new portion is on the same disk as the previously indexed material and assigns a disk sequence number as each new disk is added. This is used as part of the index pointer.

A file with few and/or short vocabulary entries may be very large but searching is fast and retrieval of desired records not difficult as the system prompts for insertion of correct disks. (In the case of biological literature, organism and chemical names average 15-20 characters. This limited SUPERFILE's performance, leading to the modifications mentioned in BIOSUPERFILE.)

Search statements can use the logical "and", "or", and "not" operators between parameters but the program does not offer nested logic [A and (B or C)]. Thus, to search for information systems running under CP/M or filing systems running under CP/M, one must enter (Information Systems *and* CP-M) *or* (Filing Systems *and* CP-M), rather than (CP-M *and* (Information Systems *or* Filing Systems).

Input parameters and logical operators are entered one at a time in response to a prompt. The statement can be saved in a file and used subsequently without re-typing. In a personal file, truncation and nested logic are not missed because the program reports a list of entries with "nearby" spelling if a string is mistyped and not found or because one is uncertain of the exact spelling.

Revising a record involves running the index generator again, but depending on the type of data, an augmentation record could be used rather than revising the initial record.

The documentation was quite good and there was a tutorial on disk, with a small sample file of computer literature citations.

Among SUPERFILE's advantages were its tidy size – around 28K – and a series of utilities for sorting, merging, and character filtration. Like many CP/M programs since the expansion of MS-DOS, the original version of SUPERFILE is no longer widely offered and has been replaced by a more elaborate and expensive system.

I find the original a very useful personal and small business system.

HARDWARE REVIEWS

Commodore 128 Revisited

by Ron Grout

After reading Reilly Burke's review of the Commodore 128's CP/M+ system (July 1986 **FOGHORN**) I was surprised that he rated it as highly as he did.

I have long been an Osborne and a Commodore enthusiast, but when the C-128 arrived, I was quite disappointed. Many of the things that Mr Burke skipped over as being an inconveniences, drove me nuts.

Fortunately that has changed. The upgraded CP/M system, some new additions, and some neat little public domain programs have really turned this computer into a CP/M gem.

Let me briefly say that I cut my computer teeth on the Osborne 1. She was a real beauty for what I needed as a teacher.

I later bought a Commodore 64 so that I could access the color, graphics and sound of that system. Later again I bought a Kaypro 4/84 with a 500K RAM-disk for use at home while the Osborne was permanently stationed at school.

When the 128 came out I upgraded to that system and gave the C-64 to my nephews.

As I said previously, the CP/M system was originally a disappointment.

Besides the fact that the keys were non-repeating, there was no way to print many of the ASCII characters to ANY kind of printer.

Then there was the problem of speed. The C-128 runs at a clock speed of 2 megahertz, the Ozzi and the Kaypro run at 4. That's a significant stepdown.

In addition, disk access speed is slower. The disk read isn't too bad, but writing to disk was yawn inspiring. The 1571 disk writes, then verifies. That means that copying 300K of data can take as long as 20 minutes.

A public domain program called C-1571.COM eliminates the verify and doubles the write speed of the 1571, making it much more usable.

Other things have improved.

In the last six months Commodore has upgraded it's CP/M+ system, introduced the 1750 500k RAM expansion module (used as a RAM-disk in CP/M) and announced and verified a new 700K 3-1/2" disk (1581) which in the CP/M mode has a transfer mode of 8500 cps (60 percent faster than the 1571 disk drive).

In the public domain area, a small program called CONF.COM has worked some small miracles, and more information is now available for making things work properly. Let me explain each of the above.

1. CP/M+ Upgrade (8 Dec, 1985)

Commodore is now getting this program out to its customers. This system sets up a keyboard buffer which allows for repeating of all keys. This by itself would be very useful, but the upgrade also allows access to Drive M if you have a RAM-disk (described later), and allows access to the USER PORT which is home base for your Modem (300 baud modems are available for under $50 and 300/1200 baud modems are under $200).

It does still present some problems for using your printer. Some ASCII characters are still unprintable with normal Commodore interfaces (including quote marks). Fortunately CONF.COM (discussed later) takes care of this problem. (Both on **FOG— CPM**.121.)

2. 1700 and 1750 RAM Expansion Modules

The 1700 RAM expansion ($150) allows for a RAM-disk of 128K while the 1750 RAM expansion ($270) gives the user a RAM-disk of 512K. This RAM-disk speeds WordStar and dBASE II significantly. I believe most other programs would also show greater speed.

I have the 1750 module because 128K is just too small for most of my needs. With 512K I can have WordStar, The Word Plus and a number of utilities all in RAM. Of course WordStar must be reconfigured to work on Drive M.

On my Kaypro I have an SWP 512K RAM-disk and it is no where near as smooth and compatible as the Commodore RAM-disk. As an example, using the public domain SuperDir (SD.COM) can crash the SWP board. The same goes for PRESTO. Using SmartKey and Word Plus on the SWP together can cause disaster.

I have found no problem with incompatibility on the Commodore RAM-disk with any program that will run on the C-128, and if some of the memory resident programs (PRESTO, etc.) ever decide to set up their programs for this computer, they have an extra 64K of bank switched memory that they can work with. Another advantage I have found is that once you have used the RAM-disk, you can reset the computer as a Commodore 64 to play some games or do some graphics work, then reset the computer again into the CP/M mode and your files are still intact on the RAM-disk just as you left them.

Nifty! Better not let your secretary have one of these.

3. CONF.COM

Without this public domain program, CP/M+ on the 128 is crippled. CONF allows:

- Setting your printer to work properly;
- Speeding up your screen and key movement;
- Setting your cursor to block, underline or half block and fast, slow or no blink;
- Setting border, background or cursor colors;
- Setting the Baud Rate, Key Click Volume, Parity or Date.

There are many other things you can do with CONF, but the above gives you an idea of what is available. I use Conf as part of PROFILE.SUB which boots up automatically when I start the machine.

Generally I set the printer to ASCII (sends out all ASCII characters correctly), turn off the 40 column screen, set the keys to repeat (speeds up the screen) and set the cursor to a slow blink when in WordStar and solid in dBASE II.

4. Printer Interfaces

I have found the standard Commodore compatible interfaces are not satisfactory with the CP/M mode. Besides having problems with some of the dip switch settings, they tend to send a line feed with each carriage return. This messes up underlining and bold print.

I have found that the Royal PCUA #013167($45) parallel interface for Commodore computers works beautifully. It was designed to work specifically with one of Royal's letter quality printers. I don't think that Royal even knows how well it works with other printers, but I have it hooked up to my Epson and it works perfectly. Micro W makes the MW-350 which is supposed to have complete CP/M emulation, but I haven't wanted to spend the $80 necessary to test it out.

In addition to the above, Commodore offers the MPS 1000 printer for the C-128 system. It is configured to work in PETASCII for use in the 64/128 mode and with the flip of two dip switches, emulates IBM printers for use in the CP/M mode.

It is best to use CONF.COM to properly configure it through the serial port. The MPS 1000 is made by Epson and my only regret is that it emulates the IBM rather than using standard Epson codes. There is just enough of a difference to cause some problems of program compatibility in C-64 mode when not using PETASCII emulation.

Commodore also has a letter quality printer called the DPS 1101 which allows standard ASCII settings by dip switch and goes through the serial port. Frankly it's a Juki 6100 in disguise. Commodore has discontinued it, but COMB Direct Marketing is liquidating them for $188. I love mine.

5. KEYFIG.COM

Mr Burke mentioned the Keyfig program that comes with the C- 128. I have both Smartkey and Xtrakey. Keyfig is easier to use, more flexible and almost as powerful as the two mentioned.

Briefly it allows you to assign an ASCII character, a control character or a string of ASCII and control characters to each key in four modes (standard, shifted, Commodore shifted, or with control key). As an example, for WordStar, I have assigned the keypad 1 key to be:

```
Standard   ^OG
Shifted    ^A
Control    ^KS^QP
C/Shift    Defined as the character "1"
```

This gives tremendous flexibility. In addition, the C-128 has many keys begging to be redefined. There are four function keys (16 possible definitions), a RUN/STOP key sitting where the TAB key should sit (guess what I redefine that as?), two extra cursor keys, CLR/HOME, ALT, HELP, LINE FEED and an extra pound key.

Though not widely known, you can even set definitions on the fly. It's quite a good little package. Its only weakness is that it is horribly documented.

6. The C-128 Keyboard

The keyboard has a real nice feel to it but it does have some quirks that are not easily adjusted to. The strangest is the Commodore key at the bottom left of the keyboard. It acts like the SHIFT/LOCK key, but not really. The SHIFT/LOCK prints the ! instead of the 1, the & instead of the 6. Get the picture. It works as if you were holding the shift key down.

The Commodore key does the job a lot neater and acts the way a SHIFT/LOCK really should. The layout of the keyboard is like the old IBM Selectric. The " is over the 2, the ' is over the 7 and the : and ; have their own keys. So do the @, ^, _ and *. In an attempt to make the C-128 100 percent compatible with the C-64, some compromises were made(the C-64 always won however).

7. Documentation

I consider Commodore to be worse than Kaypro at documenting its computers. The CP/M section of the system guide is very poor.

There are however some much better books out there.

If you send for the special CP/M package, you can get Digital Research's *CP/M+ Handbook* ($20). *The Commodore 128 Programmers' Reference Guide* ($22), is very helpful, and Thom Hogan's *CP/M User Guide* covers CP/M+ quite well. However, learning to use such things as Keyfig are pretty much left up to the user to figure out.

8. Software

The C-128 does run a number of Osborne programs but I have my doubts about the legality of this.

I have standard copies of most of the programs that I normally use (WordStar, dBASE II) and these programs should be configured to the ADM-31 terminal.

The same goes for TURBO Pascal, Mix Editor, and Thoughtline. Multiplan doesn't have a true ADM-31 setting, but ADM-3A works fine (as it does with the Osborne and Kaypro). The Kaypro version of VDO did not work properly with the original system disk but works beautifully with the 8 DEC upgrade. Most other public domain programs that are not terminal specific work as expected.

One programmer in a letter to Micro/Systems Journal stated that he had no problem accessing the Commodore 64 graphics and sound from within CP/M.

That could lead to some interesting software sometime in the future. The problem with this is that Commodore is doing little to support the C-128's CP/M. They have even frustrated those companies that do support CP/M with their lack of support. It would be nice to think otherwise, but I'm afraid that really creative software set specifically to the 128's CP/M is going to be a long time in coming. One might say that this is a computer of incredible potential, but little hope.

Can one imagine what might happen if Micro Cornucopia built a 5 megahertz upgrade (like they did for the Kaypro) to add to the existing 500K Ram-disk and the new 700K 3-1/2" disk? Add to that a program similar to IBM's Deskview which resides in the bankswitched memory and the built in C-64 and C-128?

All I can say is "WOW".

8. Prices

Commodore prices are generally reasonable, but a complete system isn't going to be cheap. Corners can be cut by buying through mail order and replacing the RGB monitor with a monochrome monitor, but you better know where you can get an RGB conversion cord (about $15) so that you can work in 80 columns. Different configurations can also be set up to keep the price down. Below are the prices that I have seen. High prices tend to be found in the computer stores while low prices are usually found in mail order.

Product	High	Low
C-128 Computer	$299	$245
1571 Disk Drive	$259	$214
1750 Ram Expansion	$299	$268
1902 RGB Monitor	$300	$245
MPS 1000 Printer	$245	$215

9. Evaluation

The C-128 system is excellent for students, teachers, and small businesses. There is more software sold each year for the built in Commodore 64 than for any other computer with the exception of the IBM.

In the home market, the Commodore, even with all the foulups and company problems, still reigns supreme, making it an excellent choice for a family.

* * * * * * *

The INOVA-500 RAM-disk for The Osborne Executive

by A. Hews McCann

Last year I succumbed to a seductive advertisement in the **FOGHORN** and ordered the INOVA-500 for my Osborne Executive from Microtech Computer Services.

I was intrigued by the prospect of having 512K of RAM memory to play with, and the convenience of having three effective disks instead of the two disks that came with the Executive.

Some of my expectations proved to be fantasies that were not entirely realized in the actual operation of the INOVA, but by and large I am well pleased with the RAM-Disk.

The installation of the INOVA involves simply the removal of the old memory board and replacing it with a new board containing the high-capacity memory chips.

The installation instructions were very clear and detailed. I am certainly not a hardware freak, but I managed to complete the installation without any difficulty.

According to the *Executive Reference Guide*, the Executive comes with memory enabled for Bank 0, which is used by the system, and banks 1 through 8. Banks 2 through 6 are not implemented. Banks 7 and 8 are partialy used by the system.

The manual also states that the machine can have up to 32 banks by devising a different memory scheme. The 64K of bank 1 are the only spaces that can be used for programs and data by the operator.

The INOVA uses eight banks of 64K to achieve a total of 512K of memory. Two of these are exactly the same as the original Executive Banks 0 and 1. The top 4K of each bank are used by the system to keep track of what's been stored in the bank. I am not sure what the designers of INOVA did with the functions that were formerly in banks 7 and 8. They still seem to be activated.

In addition to the INOVA software, a very useful program called SKEYS is included on the disk furnished with the INOVA memory board. Actually the RD (for RAM-disk) program is tied to the SKEYS program and will not function without it. SKEYS must be RUN before RD.

To quote the manual:

"SKEYS gives the Executive owner over two dozen additional functions, which take up no program space and are available to the user even in the middle of most other application programs. These functions include a 10-digit calculator with two memories, a function key editor, "smart" function keys (that can call other function keys or prompt the user for input), four extra sets of function keys, a redefinable keyboard, 22 extra function keys, (assignable to just about any key, with up to 255 characters each), an ASCII chart, a screen print, typewriter emulation, on-line quick reference guide, instant arrow key redefinition, time/date/last calculator answer on special function keys, printer control, clear screen, PROGRAMMABILITY, and tools for the programmer, like a hexadecimal 16-bit calculator and a memory editor, plus much, much more."

Now I am sure that you must agree that this is a very impressive list of capabilities for one program to have. Obviously not all of them will be useful to all users, but most of them are very useful indeed.

At any time during the operation of a source program you can press Shift^ then a control letter, like **P** for print and the desired function will operate without interfering with the operation of the source program.

When you are through with the function, just press ESC and you are returned to the place in the operating program you were at when you called the function. This works even if you are in the middle of saving a program in WordStar.

One use I find of value when I am running one of my structural calculation programs is the calculator mode. If I need to calculate the value of an input item while the program is running, I press Shift^C and the calculator is displayed on screen.

After finishing the calculation, I can press Shift^P and the entire screen is sent to my printer. Press ESC to return to the operating program instantly where I can now enter the data I calculated.

Another cute function is Shift^1 (or 2, or 3) to change the arrow definitions. 1 is for CP/M movement, 2 is for WordStar movement, and 3 is a unique definition that works equally well for both CPM and WordStar.

As well as the SKEYS program, several other useful utility programs come with INOVA. The one I use most frequently is called SWAP. It has the ability to redefine the three disks, A, B, and C. To explain the advantage of being able to SWAP A and C, for instance, another unique INOVA capability needs to be explained.

INOVA has the ability to read an entire floppy disk of programs into RAM-disk in about 15 seconds. I have prepared a series of disks for the programs I use frequently – one for WordStar, another for dBASE II, another for Land Survey Calculations, two for Structural Calculations, etc.

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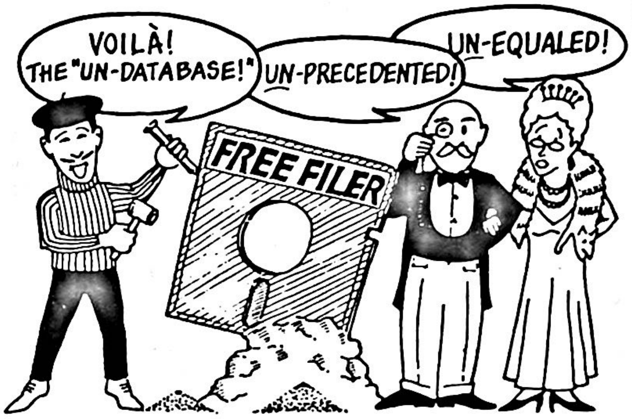
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I start by operating the SKEYS program then RD RB which causes the RAM-disk program to Read the disk in Drive B. If I am using WordStar, this puts the WS program in Drive C and I can then use Drive B for my data disk. But WS expects to be in Drive A, so I SWAP AC to redefine the RAM- disk as Drive A and WS is happy.

Another useful utility called SPRINT creates a 64K print buffer. Print statements are fed into this buffer and then into the printer.

This is my first experience with a print buffer. It's great! Now I never have to wait while my printer catches up with my operating program. In the past I would overrun the printer in my haste, then only part of my next data entry would be picked up by the computer and the program would give bad results. Then, it was back to the beginning and run the whole program again. This can be pretty frustrating. Now I go on my merry way entering data as fast as I wish with never a lost character.

The bad part is that SKEYS is pushed up to the top of memory where it sits quietly waiting for a Shift^ to call it into instant action.

What's bad about that you ask?

Well since SKEYS gets there first, no other program can be sent up to the top of memory. So what? Presto won't work, neither will the WordStar R function to run another program while a document is being edited. SpellGuard works, but the Thesaurus program doesn't.

I don't have a comprehensive list of programs in competition with SKEYS, but I think there must be quite a few.

If you anticipate that INOVA will provide an accessible RAM of 512K, think again; it won't. But its ability to create variable size RAM-disks is still impressive. The command RD 260 creates a RAM-disk with 260K of accessible memory. This is the maximum size if SPRINT is activated. The absolute maximum size is 310K, without SPRINT or 260K with it, although a separate utility can squeeze in 390K.

The Executive BIOS allows a maximum of 64 filenames in a disk directory. But INOVA lets you select the number of names so the `Disk Directory Full` error will not plague you. The command RD 260/128 will create a RAM-disk with 260K of memory and space for 128 filenames in the directory.

If the size of memory is specified you must use PIP or NSWEEP to enter programs into RAM-disk C. When the RD RB command is used, the size of the RAM-disk is automatically set at 183K – the size of the disk being read.

This size cannot be changed without erasing the RAM-disk. If the programs on the disk do not total 183K, the unused space can be filled with additional programs using PIP or NSWEEP, or it can be used to store data generated by an operating program. The use of either of these options can result in a *Disk Full* error, so BEWARE.

The speed of the INOVA RAM-disk is phenomenal. After WS is patched with a utility program included, the Main Menu appears almost instantly when WS is typed in. MBASIC also reacts instantly without being patched. All other operations seem to be speeded up significantly.

In spite of all the verbosity above, I have not mentioned many of the useful features of INOVA and the utility programs furnished with it. Try it, you'll like it.

[The INOVA 1000 with 1 Megabyte of memory now is also available. Jack]

* * * * * * *

Emergency Power Supplies

by James Bavendam

The Systems

Emergency Power System – Tripplite Mfg., Chicago, IL Model BC-425-FC
425 watts, frequency controlled, alarm, engages within 1/2 cycle of power outage, internal gel battery, square wave output. $599 retail; (dealer $439; $364 for two or more – you might be able to use this for a little bargaining power).

Line Conditioner-Stabilizer – Tripplite Mfg., Chicago, IL Model LC-1800
98 percent efficient, load regulation 2 percent for no load to full load, Line regulation +/- 5 percent over input range from 98 to 138 volts, response time rated at 1/2 cycle typical, 3 cycles maximum. $299 retail; (dealer $224; $185 for two or more)

Emergency Power System

A brief note on emergency power supplies. As one would fear, there are a variety of units available – all with different features. The following are some main distinctions.

To Kick or not to Kick. Some units stay on continuously and provide total isolation from the outside current. Power company electricity is only used to continuously charge the battery(s) supporting the system.

These units are "ideal" protection as they provide the maximum of protection from spikes and low voltage or loss altogether.

Problems:

(1) They tend to be quite expensive,
(2) As they are on continuously, they can fail simply due to long-term usage.

The "kick in" style of units vary in how fast they will provide power. The better ones will provide power within 1/2 cycle of power loss.

You need to test a unit with your equipment to assure that the time it takes to "kick in" is fast enough not to cause problems with your system.

Another issue with the units that "kick in" is, Under What Condition(s) do they provide power? All provide power below some particular voltage. You need to check with each manufacturer to see just what that voltage is for their unit – there is no "standard."

Those advertising "brown out" protection can engage as early as 115-118 volts. Those advertising black out protection might not engage until about 90-95 volts. Depending on your system and the stability of your power line, much havoc might be wreaked at 100 volts without your unit ever trying to engage.

Square or Sine. They "all" claim to output 120 volts in varying wattages. The more expensive units produce a sine wave much like that received from the power company. The less expensive units produce a square wave. I have been told that a square wave will not work in some electric/electronic equipment – most notably motors with brushes. Sine wave output is preferable if you can afford it – then you never worry what you connect it to.

If you ever do try a square wave power supply and a motor simply "vibrates" instead of turning – shut it off immediately before damage occurs. Although it may be harmful to leave it connected, as far as I know it will not hurt equipment simply as a brief test. I encourage any specialist to correct me on this. If in doubt – contact your manufacturer for advice on their equipment.

Frequency controlled or not. Some of the least expensive units will produce 120 volts – but may not closely control the frequency (e.g., 50 or 60 hertz). It is preferable to have an output that is frequency controlled.

For more than a year now I have been using an emergency power system from Tripplite Mfg., Chicago, IL. The system, overall, has been quite satisfactory.

I had never seriously considered a backup unit until I purchased a hard disk. My floppies were always easy to backup and their directories were not too hard to reconstruct if needed. On the other hand, the thought of trying to reconstruct the directory of a 15 meg hard disk that was trashed during a power surge or outage was frightening. I DO backup up the disk with floppies, but that is no panacea.

Tripplite offers a variety of power systems. One of the most significant features to note initially is that ALL the power supplies from Tripplite produce a square output wave. A square wave will not operate some equipment.

I have not found this to be true with the Zorba, the ACT Marketing hard disk, my printers, or other peripherals.

If in doubt, ask your manufacturer.

Some particular motors will just sit there and shake back and forth instead of actually rotating.

I was concerned about the square sine wave (not being an electronics specialist). The technical department at Tripplite told me that with some equipment, you just have to test the power supply. If the equipment actually runs, then the square wave will not hurt it – especially for the time it takes to power down.

Tripplite has two major lines of power systems. The "BC" line of power supplies come with an internal gel battery that will provide a limited duration of 120V power in the event of a BLACKOUT – NOT a brown-out. The units kick in within 1/2 cycle of loss of power (below about 90-95 volts). The BC supplies come in 200, 425, and 1000 watt sizes. The 425 and 1000 supplies have output frequency control as well as audible and visible alarms.

The second line of power supplies are identified by a "SB" notation. These units are intended for a broader application including portable power and range from 200 to 4000 watts. They do not include a battery – you supply the 12V battery(s).

I have had a BC-425-FC (internal battery, 425 watts, frequency controlled, internal spike protection) unit for more than a year now. At full power (400+ watts) it is rated at 10 minutes. At the load of the Zorba plus the hard disk (about 230 watts) I should get about 20-30 minutes of power. When I first received the supply, I tried several tests with it.

The first and most obvious one was to run a program on my Zorba and "pull the plug." The supply screetched – but nary a flicker from the Zorba. I did this several times in succession – still no problems – even while WordStar was searching for a character string.

The second test I tried was to "pull the plug" while the floppies were in the midst of writing a WordStar text file. Still no problem. I quit and pulled the file back into the program and could find nothing missing or damaged.

The third test I tried involved my hard disk. After backing up the hard disk to floppies, I tried the same plug pulling while WordStar was writing a file out to disk – after all, this WAS why I purchased the backup supply. Again no apparent problems.

Thus, the Tripplite essentially did what it was advertised to do. The Zorba and the hard drive do sound a bit odd when running on a square wave – but Tripplite has assured me that this is perfectly normal and not damaging to the equipment.

The main reason for using a square wave is cost. They claim that the supply would be substantially more expensive if it produced a sine wave. If you can afford it, a sine wave unit would most likely be preferable – if you can afford it. It would also be preferable to have a unit that would provide brown out protection.

Alas – the lack of perfection in the world around us.

Since I purchased the EPS, it has protected me no less than five times. Once clearly was a total failure during a hard disk write. I consider my "Bacon Saved" and the unit to have been a useful purchase.

LC-1800 Line Conditioner-Stabilizer

You might have noted that the emergency power supply was not intended to provide brown out protection. This was a surprise to me after I purchased the unit as I assumed it would.

This is definitely worth exploring before you buy or at least become committed. Even with the EPS from Tripplite, I found that some of my unusual operating quirks that accompanied freezer/refrigerator/air conditioner/etc. cycling were not cured. I was forced to look for "brown out" protection. (Suckered by marketing departments again.)

Tripplite offers three different stabilizers. The LS-600 has 2 outlets, can handle 5 amps, has internal spike protection, and offers some degree of line adjustment for brown-outs (the exact degree is not clear from Tripplite literature). Retail $119.

The LC-1200 has four outlets, filter protection (to the outside line and between the two pairs of its outlets), 10 amp load, and spike protection. It is claimed to be 98 percent efficient. While I would have some idea what a claim like this meant if made by Ford (it could not be true), I am not clear about the significance of this claim in relation to this specific product. If anything – it might indicate that one would not expect much heat and power wastage from the unit.

The load regulation is rated at two percent for no load to full load – no effect of operating temperatures (0-60 deg. C). The line regulation is claimed to be +/- five percent over the voltage input range of 96-138 volts. Response time is typically 1/2 cycle – although it may range as high as three cycles. Retail $219 (dealer $164; $134 for two or more).

The LC-1800 has the same features as the LC-1200 except that it will handle 15 amps. It also has three banks of two outlets with filtering between each bank, (i.e., six outlets with filtering between three pairs).

It also includes six vertical panel lights (like a thermometer) that indicate the relative voltage from the power company. Actual voltage is not indicated. Instead, somewhat cryptically, the lights are labeled: Very Low, Low, Normal, High, Very High. I unsuccessfully tried to find out the voltages these lights represented.

The LC-1800 has solved a variety of odd happenings as compressor motors around the house kick in and out. I have been surprised at times just how much the line voltage varies by itself. Once I witnessed a bizarre combination of low to high surges (repeatedly). A number of times when it was on VERY HIGH, my backup up system would chirp indicating an brief loss or power altogether.

Definitely something for Steven Spielberg. I have no complaints about the unit. Again, it does seem to do what it is advertised to do.

NOTES: It may be important to note that all the line conditioners from Tripplite use a "stepping" procedure, i.e., the voltage can drop over a range of actual input voltages before a correction factor is applied.

Thus, the unit does not keep exactly 120V output. It applies corrections in a series of steps to correct for a voltages within particular ranges. More expensive units from other manufacturers can have the ability to "infinitely" adjust, keeping a "perfectly stable" output voltage of 120 volts.

The reason for this "stepping" adjustment is cost. The unit would be substantially more expensive with the "infinite" adjustment electronics – and relatively few applications seem to require such fine regulation.

Another odd (to me) situation occurs when you use the Line Conditioner-Stabilizer with the Emergency Power System. It would seem logical to me to put the Emergency Power system first – then the Line Conditioner – then the computer. Thus as the voltage varies through total input ranges (including how much it might lower before the EPS kicks in), the LCS is always there to "cushion the blow."

But NO.

The Line Conditioner is only designed to have a sine wave input. It cannot operate on a square wave.

Thus, you have to put the LCS first, then the EPS. For those of you who do not see the problem in the sequence – don't worry. For those of you who DO see the problem with this sequence, I am assured by Tripplite that the conditioners go far beyond the normal fluctuations one would expect from our rather well regulated power companies of the 1980's.

Although the power will vary, it is usually regulated well enough that if it gets beyond a somewhat limited range, it would be due to lightning or total loss.

Lots and lots of assurances – oh well.

The LC-1800 has seemed to work well. While other people in the area have shown me chips that were exploded due to power surges (no kidding), my unit hums along.

In closing, I have smiled a little when I realize that: on the wall outlet is a "Peach" with filtering and spike protection, after that is a Line Conditioner with filtering and spike protection, after that is a Power supply with spike protection (I have never been noted for over-kill) – I suspect that under conditions of a direct lightning strike – it will skip the equipment and go straight for me!

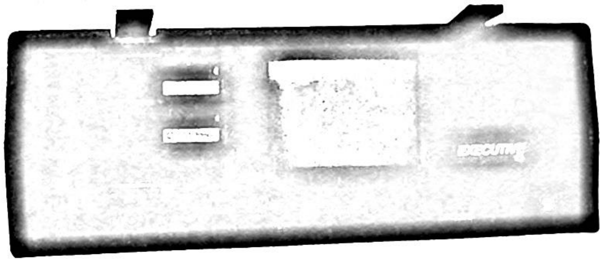
* * * * * * *

UPGRADE
The Executive

Enhanced Storage Upgrades

Increased Storage Plus a Whole Lot More...

DOUBLE Speed *DOUBLE* Memory
DOUBLE Sided *DOUBLE* Drives



The Executive versions of Nuevo's Enhanced Storage Upgrades include two new double-sided disk drives, your choice of 48 tpi (2X2) or 96 tpi (4X4), a multi-function memory board upgrade, an 8 Mhz Z-80 CPU and new disk controller and monitor ROM IC's. The 2X2 provides 386K per drive and the 4X4 has 782K per drive. Installation is straightforward and simple. There is *no* soldering.

In addition to doubling (or quadrupling) the disk storage space, the Nuevo ESU's for the Executive include the following features as STANDARD:

★ **Expandable to Four Floppy Disk Drives**
The Executive ESU's can address up to two additional external disk drives, in any combination of 48, 96, or 100tpi, in any combination of 3½, 5¼, or 8" drives.

★ **Foreign Disk Handling**
The ESU Executive reads, writes and formats over 40 different computer formats, including IBM PC DOS 1 & 2, both SS and DS. The new BIOS recognizes *automatically* all of the following plus even more:

SS FORMATS

DEC VT 180 DD
Heath Magnolia DD
Heath Z90 DD
IBM CP/M86 DD
Kaypro II DD
Lobo Max80 DD
NEC8000 DD
NEC8001A DD
Nelma Persona DD
OKI if 800 DD
Osborne One SD&DD
Osborne Exec DD
TI Pro CP/M86 DD
TRS80 I SD
TRS80 III DD
TRS80 IV DD
Xerox 820 SD
Xerox 820 DD

★ **8Mhz Z-80**
The Executive runs with twice the speed of the original factory 4 Mhz processor!

★ **3msec Drive Step Rate.**

★ **256K of *High Speed* Dynamic RAM**
More memory for CP/M file buffering!

★ **Upgradable to 2 Megabytes of Memory!**
(Pending availability of new RAM's from manufacturers). The multifunction board is socketed for the next generation 1 Megabit X 1 RAMS.

DS FORMATS

Altos 580 DS/DD (96 tpi)
Ampro Little Board (96tpi)
Cromemco CP/M80
Epson QX-10
Heath Z100
HP-125 (CPM86)
NEC8801A
Nuevo 0-1 2X2
Nuevo 0-1 4X4 (96tpi)
Osborne Vixen
Sanyo
Televideo 803

THE EXECUTIVE 2X2 $595.00

THE EXECUTIVE 4X4 $695.00

Also available are the following OPTIONS:

★ Option A: 512K of Dynamic RAM (Total)
Use as *fast* 298K RAM disk with a two drive system or for file buffering with three of four drive system. $40

★ Option B: Real Time Clock (battery back-up)
No resetting of the CP/M clock with each power-up. Screen display of time and date. Settable alarm time. $30

★ Option C: 8" Floppy Disk Drive Interface
Up to 2 external 8" drives can be used in the system. $25

*Option F: SCSI/SASI Port
For use with a hard disk. $100
*Option G: Ext Drive Housing
w/pwr supply & cabling. $75
*Option H: 21 Meg Hard Disk
Requires Option F) $695

The multifunction board (MFB) component of the Executive ESU's is available as a separate item. As such it comes without disk drives and without the double-sided drive and 8" drive capabilities. The 8 Mhz CPU and 512K of high speed RAM, of which 388K can be RAM disk, are standard. The Clock, EEPROM and Math Processor are optional. It is upgradable later to a full ESU.

THE EXECUTIVE MFB $425.00

Prices Subject to Change Without Notice

TO ORDER, CALL OR WRITE:

NUEVO ELECTRONICS CORPORATION

P.O. Box 209 / Richmond, TX 77469 / (713) 341-6001

VISA

YES! I want to "Upgrade" my Osborne with the item(s) I've checked below!
☐ 80 Column Upgrade @ $200.00 ☐ 80 Column Upgrade with BRG @ $230.00
☐ Double Density Upgrade @ $150.00
☐ Double Density Upgrade with cable for Standard Drives @ $165.00
☐ 0-1 2 x 2 Upgrade (772K) @ $595.00 or ☐ $445.00 if Nuevo DDU owner
☐ 0-1 4 x 4 Upgrade (1564K) @ $695.00 or ☐ $545.00 if Nuevo DDU owner
☐ My 0-1 has a ☐ Brown Case ☐ Blue Case ☐ and is ☐ SD ☐ DD
The Rev. # is ______________ (Note: The Rev. # is usually displayed at the top of the screen when the computer is first turned on)
☐ Exec 2 x 2 Upgrade (772K) @ $595.00 ☐ Exec 4 x 4 Upgrade (1564K) @ $695.00
☐ Exec MFB Upgrade @ $425.00
☐ Exec Options (please list) ______________

Name ______________
Address ______________
City ______________ State ______________ Zip ______
Phone ______________
Texas residents please add 5 1/8% sales tax.
☐ I'm enclosing a check or money order for the item(s) indicated.
☐ Please ship C.O.D.
☐ Please charge to my ☐ VISA ☐ MasterCard
______________ Expiration Date ______
Authorized Signature ______________

ARTICLES

Better "HELP" Messages from SC2 and dBASE II ver 2.4x

by Alan Chattaway

For those who may not have noticed, the help files for both SuperCalc2 and dBASE II (v2.40 and later) are both ordinary ASCII text files. Therefore, you can edit them in the (N)on-document mode of WordStar to change the help messages they give!

For SuperCalc2, the help messages are in SC2.HLP and are divided into menus, each of which is identified by a control character at the beginning, so that SuperCalc2 can find it.

One important omission is in the menu you get when you type ? before anything else. This menu says you may begin a line with one of these characters – / = " ' – and anything else starts a formula.

It fails to mention that SuperCalc2 supports "textual values". Distinct from text, which always has a value of zero, textual values are 1-8 characters enclosed in both parentheses and quotes, like this ("Canada") and may be referenced in formulas like this self-adjusting currency conversion formula:

```
IF(E6=("Canada"),E7*0.71,E7)
```

You could easily add a line to the SuperCalc2 menu mentioned above, to describe textual values and give an example of their usage.

dBASE II, version 2.3b has no on-line help. For later versions, the dBASE help messages are in DBASEMSG.TXT, and dBASE finds them by searching for a keyword supplied by you.

Thus, "HELP QUIT" will search the message file for the word QUIT at the left end of a line, prefixed by a character that tells dBASE this is a keyword. If no such keyword is found, you get the message "NO HELP AVAILABLE" or something like that.

The advantage of this is that you can shorten or delete seldom-needed messages to make the message file smaller, or add additional help messages of your own making up your own new keywords. These messages may describe dBASE features you find hard to remember, or even important characteristics of your own dBASE programs.

* * * * * * *

Government Publications

by Cecile Kay Richter

The U.S. Government Printing Office (GPO) executes orders for printing and bookbinding placed by the Congress and the departments and organizations of the Federal Government.

At any one time, approximately 16,000 different GPO publications, ranging from simple black and white booklets to fancy clothbound full-color books, are available for public sale through mail order from the Superintendent of Documents in Washington, D.C., and directly from 24 government bookstores around the country.

The GPO issues on a quarterly basis a very attractive, illustrated, sales catalog, *U.S. Government Books.*

Each issue features annotated listings of almost 1,000 popular Government books arranged by subject categories such as Business and Industry, Careers, Education, History, and Science and Technology, as well as several pages of Recent Releases.

Since May 1984 one of the categories has been Computers and Computer Science. Prior to that time – the "Catalog" goes back to September 1982 – computer books were listed under the category Science and Technology.

Recently, while at the University of Alaska, Anchorage library, I went through their collection of *U.S. Government Books* catalogs and recorded selections from the category Computers and Computer Science that I thought would be of interest to users of microcomputers.

I also recorded ordering information for those selections. Then, since the catalogs go back to 1982, the librarian directed me to the latest bimonthly GPO Sales Publication Reference File (PRF) to verify current availability and prices.

What a find that was!

The PRF is a complete master file on microfiche of GPO publications for sale, (the PRF is also available online as a component of the Lockheed Corporation's DIALOG Information Retrieval Service).

I checked the ordering information for the titles I had listed and also recorded several additional listings that were under the PRF's subject headings Computer, Computers, and Microcomputers.

My listings appear below. The category headings and title groupings are of my own design and you will not find them in any GPO catalog. I have adapted the individual book descriptions from the annotations in the catalog *U.S. Government Books* and the PRF.

My listings are not exhaustive but I do think I have selected the publications that would be of most interest. If you would like to pursue one of these categories in greater detail, or another category, you are encouraged to investigate the "Catalog" and the PRF yourself.

With the exception of free promotional materials like the *U.S. Government Books* catalog, there are no free books distributed by the GPO.

Every item in its inventory has a price which enables the sales program to operate without using tax revenues. Purchase prices, however, appear modest given the size, format and quality of the publications involved, and the fact that mail-order postage is included in each price.

For those of you desiring to order any of the books listed below, you may do so by mailing your order to:

Superintendent of Documents
U.S. Government Printing Office
Dept. 33,
Washington, D.C. 20402

Your order form should contain your name and address, the shipping address if different, home and office telephone numbers, and for each book it's Stock Number (shown as a number preceded by "S/N" at the bottom of each listing below), quantity required, the title, unit price, and total price for the quantity ordered. You should also show the total price of your order and enclose a check for that amount made payable to the Superintendent of Documents. Orders may also be charged to VISA or Master Card.

If priority mail shipping is desired, you need to find the additional costs in advance by telephoning the GPO at 202/783- 3238 and then indicating on your order the special postage desired. Charge orders may be placed over the telephone by calling that number.

Hours of the Printing Office are M-F, 8am to 4 pm, Eastern Time. You may also write to Dept. 33 for a copy of *U.S. Government Books.* My experience is that the GPO will send you the latest copy available at the time you make your request but they will not send you editions on a regular basis.

If you have not received an order within approximately seven weeks, you may write to:

Publications Service Section
Stop SSOS,
U.S. Government Printing Office
Washington, D.C. 20402
or telephone 202/275-3050.

Availability and current prices may also be verified by calling that telephone number or you may wish to check such information on the PRF at the UAA library.

If in Seattle, you may wish to visit the Government Bookstore there where you may browse through the shelves and take your book purchases home with you. The Seattle retail outlet is in Room 194 of the Federal Building, 915 Second Avenue. Hours are 8am - 4pm local time.

The UAA library is a government documents depository library.

This means that the government documents librarian, Mr. Alden Rollins, can stock the University library with publications he wishes from the GPO's Monthly Catalog of Government Publications. In 1985 he had some 26,757 pieces from which to select. Whether any of the books listed below are available at the UAA library shall be left to the interested reader to determine.

Note: "NBS" when used below refers to the National Bureau of Standards, an agency of the U.S. Department of Commerce.

Careers and Education

Computer and Mathematics-Related Occupations. The Bureau of Labor Statistics employment outlook for accountants, auditors, actuaries, computer operating personnel, computer service technicians, mathematicians, programmers, systems analysts, and statisticians. 1986, 24 p. S/N 029-001-02869-5. $1.

Computer Education: A Catalog of Projects Sponsored by the U.S. Department of Education, 1983. Overview of the general types of computer education projects which were ongoing during 1983 covering such areas as developing computer literacy, computers as instructional aids, research and evaluation, and multi-purpose education projects. Lists 275 project summaries with names and addresses of people to contact for further information. 1984, 315 p. S/N 065-000-00202-7. $9.

Industry Wage Survey: Computer and Data Processing Services, 1982. Summarizes results of an occupational wage survey conducted in October 1982. 1983, 78 p. S/N 029-001-02791-5. $2.

Selected Characteristics of Persons in Computer Specialties. A Bureau of Census report based on the 1978 National Sample of Scientists and Engineers. All persons in the national sample either had jobs in 1970 or had previously had jobs and were looking for jobs. New entrants in the labor force for 1970 were not included. Almost all the sample persons were 30 years old or more. 1984, 33 p. S/N 003-001-91551-1. $2.

Computer Crime and Security

Copyright in Computer Readable Works: Policy Impacts of Technological Change. NBS and the National Science Foundation. No description available. 1977, 267 p., il. S/N 003-003-01843-1. $7.50.

Computer Security Techniques. Results of a major review of computer security procedures currently employed in the public and private sectors. Describes and classifies over 80 vulnerabilities. 027-000-01169-1. $7.50.

Criminal Justice Resource Manual for Computer Crime. Simplifies data processing terms and concepts so that criminal investigators and prosecutors will be better able to plan investigations and prosecute cases involving computer crime. 1979, 432 p., il. S/N 027-000-00870-4. $10.

Legislative Resource Manual. This manual assists criminal justice personnel by familiarizing them with the technical and legal issues confronting computer-related crime prosecutions. 1981, 136 p., il. S/N 027-000-01135-7. $6.50.

Security of Personal Computer Systems: A Management Guide. This report concludes that, while providing many benefits, the fact that powerful information technology is now available to a growing number of users of personal computer systems in the office and in the home may have introduced potentially serious information security risks. 1985, 68 p. S/N 003-003-02627-1. $3.

Data Base Administration

Computers and Data Processing. This is a bibliography of publications for sale by the Superintendent of Documents. 1985, 15 p. S/N 021-051-00505-7. FREE

Data Abstraction, Data Bases and Conceptual Modeling: An Annotated Bibliography. Citations to over 350 books, articles and papers on data base management, programming languages, artificial intelligence and software engineering from works published in the late 1970s. 1980, 75 p. S/N 000-003-02179-2. $5.

Data Base Administration: Concepts, Tools, Experience and Problems. The concepts of data base administration, the role of the data base administrator, and computer software tools useful in data base administration are described and defined in this NBS publication for data base technologists and managers. 1978, 41 p. S/N 003-003-01900-3. $3.50.

Data Base Directions: Information Resource management, Strategies and Tools. Proceedings of a 1980 workshop. Discusses how to evaluate and select information resources management tools, especially data dictionary systems, and how to use them effectively. 1982, 186 p. S/N 003-003-02419-8. $6.50.

Guide for Selecting Microcomputer Data Base Management Software. Information for the evaluation and selection of microcomputer data management software from the NBS. 1985, 66 p., il. S/N 003-003-02682-4. $2.50.

Report on Approaches to Database Translation. This is an NBS report that deals with transferring data from one source to another. This report firstly discusses the approaches to database translation and candidate interchange forms. It also recommends a method that may be used for representing the data structures of newly-proposed data models in a form that is suitable for database interchange. 1984, 92 p. S/N 003-003-02583-6. $3.25.

Microcomputer Systems

Assessment of Techniques for Evaluating Computer Systems to Federal Agency Procurements. Identifies and qualitatively assesses computer system evaluation techniques for use during acquisition of computer systems. 1984, 36 p., il. S/N 003-003- 02561-5. $2.

Digital Computer Basics. This Navy Rate Training Manual teaches the fundamentals of digital computer repair. Designed for persons with some background in electronics. 1978, 302 p., il. S/N 008-047-00256-4. $8.50.

Future Information Technology:Telecommunications 1984. Aspects of telecommunications technology including a telecommunications forecast through 1999, three perspectives on the AT&T divestiture, security in a distributed environment, management implications of the trends in information technology, and more. 1985, 347 p., il. S/N 003-003-02626-3. $9.50.

Issues and Recommendations on Microcomputing. This study by the General Services Administration Federal Software Testing Center presents issues and recommendations in the following areas: existing microcomputer bases, microcomputer user groups, hardware/software requirements, standardization, communications requirements, computer security, microcomputer acquisition, user support, and end-user responsibility. 1984, 30 p. S/N 022-001-00133-3. $1.75.

Issues in the Management of Microcomputer Systems. Guidance in the management of microcomputer systems and background information on the need for establishing a management policy. Also includes issues and alternatives which can help an organization in its management and support of microcomputers. An NBS publication. 1985, 54 p., il. S/N 003-003-02678-6. $2.25.

Microcomputer Management Guidelines. Identifies the major factors that comprise microcomputing and suggests various techniques that can stabilize the environment and form the basis for a microcomputer policy. Also includes references and additional publications to supplement information presented in the guidelines. From the General Services Administration Federal Software Testing Center. 1983, 98 p. S/N 022-001-00132-5. $3.25.

Microcomputers: A Review of Federal Agency Experiences. Results of a study which reviewed Federal agency experience with computers. 1983, 146 p. S/N 003-003-02492-9. $5.50.

Microcomputers: Introduction to Features and Uses. Introduces microcomputers and their uses in Federal government by clerical, professional and technical staff. Identifies motivations, costs, and risks of microcomputer use, and recommends successful implementations. (Cont. page 36)

CALENDAR

Under this heading you will find the dates and times (in order of state and area code) of activities and events of the Affiliated Member Organizations. Listings are the responsibility of the groups' officers who must send changes to **FOG** office before the first of the month prior to publication (December 1st for the January issue). For a list of other groups, send a stamped, self-addressed envelope to the **FOG** office. Please include a note with your geographical area. To verify the meeting date, time, or location, call the number in the right hand column. WC indicates wheel chair access to the group's meeting site.

Date	City	Group	Day	Time	Meeting Address	Contact No.
Nov 17	Anchorage, AK	63–GUIDE	3rd M	7:00pm	Grandview Gardens Library, Brogaw & Mt. View Dr	907-338-1811
Dec 9	Ketchikan, AK	89–KCPM	2nd Tu	7:00pm	1182 Black Bear Rd	907-225-9249
Dec 11	Sitka, AK	83–BUG	2nd Th	7:30pm	Confirm	907-747-8615
Nov 20	Soldotna, AK	18–PENFOG	3rd Th	7:00pm	Kenai Peninsula Community College	907-262-5801
Nov 29	Homewood, AL	49–FAOUG	last Sa	1:00pm	Homewood Public Library, 1755 Oxmoor Rd	205-669-4396
Dec 11	Huntsville, AL	125–NAOUG	2nd Th	7:00pm	First American Federal S & L, 4008 University Dr	205-881-0377
Dec 11	Fort Smith, AR	23–AFOG	2nd Th	7:00pm	Lewis Paint & Supply, 4900 Wheeler	501-646-4617
Dec 2	Tempe, AZ	100–TOG	1st Tu	6:30pm	Tempe Public Libr–Pyle Adult Ctr, Southern @ Rural	602-994-0069
Dec 8	Fresno, CA	35–SMUG	2nd M	7:00pm	1434 West Shaw, Suite A	209-431-0480
Nov 27	Porterville, CA	66–SVFOG	4th Th	6:00pm	Olson Comp. Serv, 767A Porter Rd	209-781-4123
Nov 18	Stockton, CA	11–SOG	3rd Tu	7:00pm	Great American S & L, corner Ben Holt & Inglewood	209-951-4701
Nov 19	Long Beach, CA	130–OPEN	3rd W	6:30pm	CSU, Learning Assistance Center	213-498-418
Dec 2	Campbell, CA	1–1st FOG SV	1st Tu	7:30pm	Campbell Public Library, 30 No. Central Ave.	408-371-8699
Nov 20	Cupertino, CA	1–1st FOG SV	3rd Th	7:30pm	Cupertino Public Library, 10400 Torre	408-371-8699
Dec 12	Castroville, CA	5–MBAOUG	2nd F	7:00pm	Castroville Fire Station Rec Rm, Speegle & Pomber	408-728-1416
Dec 1	Menlo Park, CA	68–SMOG3	1st M	7:30pm	Crane Place, 1331 Crane	415-325-2442
Nov 17	Menlo Park, CA	68–SMOG3	3rd M	7:30pm	Crane Place, 1331 Crane	415-325-2442
Dec 10	Oakland, CA	3–EBFOG	2nd W	6:00pm	Please call for new location	415-272-9099
Nov 27	San Francisco, CA	2–SFCS	4th Th	7:00pm	St. Aidan's Church, Goldmine & Diamond Heights	415-929-0252
Dec 9	San Rafael, CA	31–MOG	2nd Tu	7:00pm	Please call for new location	415-897-0629
Dec 9	Santa Cruz, CA	116–CP/MUSC	2nd Tu	7:00pm	Green Acres School, 966 Bostwick Lane	408-476-0504
Nov 19	Pleasant Hill, CA	60–MTDOG	3rd W	7:00pm	Hayward State U, Room 312, 3100 Oak Park Blvd.	415-933-2665
Dec 3	29 Palms	114–HOG	1st W	7:00pm	High-Desert Servicemen's Center	619-367-2440
Nov 19	Arcata, CA	29–HOG	3rd W	7:15pm	WC Humboldt State Univ, Sci Bldg, Rm 126	707-445-2074
Dec 4	Santa Rosa, CA	56–NBFOG	1st Th	7:30pm	Valley Oaks Apt Rec Hall, 2600 Northcoast St.	707-546-0145
Dec 11	Fairfield/Davis, CA	6–MUGSY	2nd Th	7:00pm	Confirm	707-557-5162
Dec 7	Orange, CA	113–NOCOG	1st Su	2:30pm	Chapman College, Sci Bldg, Rm 128	714-952-5627
Dec 11	SanLuisObispo, CA	47–CCOG	2nd Th	????	Please call for time and location	805-528-2382
Nov 25	Santa Barbara, CA	69–OSBUG	last Tu	7:30pm	SB County Planning Room, 105 E. Anapamu St	805-687-8541
Dec 2	Santa Maria, CA	42–SMOG	1st Tu	7:00pm	American S & L, 401 South Broadway	805-937-1128
Dec 12	Chatsworth, CA	86–ONUG	2nd F	7:00pm	WC Wizard of OsZ, 20630 Lassen St	818-709-6202
Dec 9	Pasadena, CA	84–OKOK	2nd Tu	6:30pm	Winnette Lounge, Cal Tech Campus	818-794-3243
Dec 4	No. Hollywood, CA	106–TUG-NET	1st Th	7:00pm	Valley Plaza Park Comm. Center, 12240 Archwood St	818-763-5410
Dec 1	No. Hollywood, CA	106–TUG-NET	1st M	7:00pm	Mercury Savings, 5201 Laurel Canyon	818-763-5410
Nov 16	San Fernando, CA	106–TUG-NET	3rd Su	7:00pm	Church of Christ, 1226 Glenoaks Blvd	818-763-5410
Nov 25	Sherman Oaks, CA	106–TUG-NET	4th Tu	7:00pm	Central Savings, 4464 Van Nuys Blvd	818-763-5410
Dec 3	Sacramento, CA	61–SOG	1st W	7:30pm	SMUD Utility Bldg. (Main Aud), 1708 59th St	916-482-8804
Dec 10	Boulder, CO	65–BUG	2nd W	7:00pm	Univ of Colorado, Business School Bldg, Rm 101	303-494-8741
Dec 3	Colo Springs, CO	133–CSOG	1st W	7:00pm	Hewlett Packard (Spruce Rm), Garden of the Gods Rd	303-473-7647
Dec 10	Colo Springs, CO	133–CSOG	2nd W	7:00pm	Hewlett Packard (Spruce Rm), Garden of the Gods Rd	303-473-7647
Nov 18	Colo Springs, CO	133–CSOG	3rd Tu	7:00pm	Otero Savings, Hwy 115	303-473-7647
Nov 26	Colo Springs, CO	133–CSOG	4th W	7:00pm	Hewlett Packard (Spruce Rm), Garden of the Gods Rd	303-473-7647
Dec 4	Denver, CO	4–DOG	1st Th	7:00pm	Clements Comm Center, 1580 Yarrow, 2nd Flr	303-690-6301
Nov 19	Ft Collins, CO	115–FTCOG	3rd W	7:30pm	CSU Industrial Sci Comp Lab, Rm 200, 200 W. Laurel	303-226-4156
Dec 10	Danbury CT	40–DOG	2nd W	7:00pm	Confirm	203-775-1102
Nov 27	Danbury CT	40–DOG	4th Th	7:00pm	Confirm	203-775-1102
Dec 11	Ft. Lauderdale, FL	91–FLOG	2nd Th	7:00pm	WC Harris Comp Systems, 2101 W. Cypress Creek Rd	305-748-7237
Dec 4	Maitland, FL	20–CFLOG	1st Th		Confirm	305-282-4316
Dec 14	Miami, FL	26–GCCC	2nd Su	1:30pm	WC Fla Int'l Univ, Tamiami Campus Bld. DM-100	305-888-3154
Dec 4	Orlando, FL	16–GOCUG	1st Th	7:00pm	Photosound of Orlando, 1812 N. Mills Ave	305-295-5689

Continued next page

Date	City	Group	Day	Time	Meeting Address	Contact No.
Dec 9	Tampa, FL	46–TBOG	2nd Tu	7:00pm	Jefferson HS @ Cypress & West Shore	813-392-6169
Nov 25	Clearwater, FL	46–TBOG	4th Tu	7:00pm	St. Petersburg Times Bldg, 710 Court St	813-392-6169
Dec 10	Jacksonville, FL	98–JOUG	2nd W	7:00pm	JEA Building (4th Fl), 233 West Duval St	904-633-4920
Nov 26	Pensacola, FL	10–PFOG	4th W	6:30pm	West FL Regional Library, 200 West Gregory	904-476-8083
Dec 9	Tallahassee, FL	77–TCPMUG	2nd Tu	7:30pm	Episcopol Church of the Advent, 815 Piedmont Dr	904-878-4592
Dec 1	Athens, GA	81–CUGA	1st M	7:30pm	Call for more info	404-353-2127
Dec 8	Atlanta, GA	93–TOGA	2nd M	7:00pm	Emory Univ, Chemistry Bldg, Main Auditorium	404-636-1480
Call	Hilo, HI	124–HIFOG	????		Confirm	808-935-8678
Dec 10	Ames, IA	102–QCOG	2nd W	7:00pm	Confirm	319-386-3484
Nov 24	Davenport, IA	102–QCOG	4th M	7:00pm	Confirm	319-386-3484
Nov 11	Ames, IA	12–MWFOG	2nd Tu	6:30pm	(odd months) Ames Public Libr, 100 Merle Hay Plaza	515-769-2223
Dec 9	Des Moines, IA	12–MWFOG	2nd Tu	6:30pm	(even months) Younker's, 100 Merle Hay Mall	515-769-2223
Dec 10	Sioux City, IA	38–SOG	2nd W	7:30pm	Confirm	712-252-2182
Nov 30	River Grove, IL	80–CFOG	last Su	1:00pm	Triton College, 2000 Fifth Ave	312-654-0986
Dec 13	River Grove, IL	80–CFOG	2nd Sa	1:00pm	Triton College, 2000 Fifth Ave	312-654-0986
Dec 4	Lafayette, IN	34–HOG	1st Th	7:00pm	Confirm	317-494-1914
Dec 1	Bloomington, IN	87–IOU	1st M	7:30pm	Indiana Univ–Cyclotron Facility 2401 M.B.Sampson Ln	812-334-3234
Dec 2	Hutchinson, KS	137–HUTCH	1st Tu	7:30pm	Hutchinson Public Library	316-663-7678
Nov 25	Wichita, KS	21–OPEK	4th Tu	7:30pm	St. Pauls Methodist Church, 1356 Broadway	316-832-0447
Dec 13	Louisville, KY	64–PCCL	2nd Sa	1:00pm	Computer Emporium Training Ctr, Hurstbourne Plaza	502-459-6127
Nov 15	Lexington, KY	32–KOG	3rd Sa	12:00pm	Univ of Ky, Funkhauser Bldg, Rm 213	606-269-1684
Dec 8	Baton Rouge, LA	103–FLOG	2nd M	7:00pm	Johnson Equipment Co, 4264 Perkins Rd	504-923-0888
Dec 12	Lexington, MA	122–BOG	2nd F	7:30pm	Honeywell Electro Optical, Rt 2A	617-484-1863
Nov 25	Bedford, MA	122–BOG	last Tu	7:30pm	Mitre Corp, Rt 62	617-484-1863
Nov 19	Columbia, MD	101–OSBUG	3rd W	7:30pm	Florence Bain Senior Center	301-997-3246
Nov 17	Portland, ME	136–SMOG	3rd M	7:00pm	Portland Jetport Conference Rm	207-772-1616
Nov 20	Ann Arbor, MI	37–TOGA2	3rd Th	7:00pm	Univ of MI, Neuro Sci Bldg, 1103 East Huron	313-665-5753
Nov 17	Dearborn, MI	14–DEFOG	3rd M	7:30pm	Ford Tech Center Cafeteria, 1700 Rotundra Dr	313-671-5562
Call	Duluth, MN	118–DSO	????		Confirm	218-626-3344
Dec 11	Saint Paul, MN	111–TCOG	2nd Th	7:00pm	UM, St Paul Campus, Rm B45 Classroom Off Bldg	612-871-6076
Nov 25	St. Louis, MO	55–GatewayCP/M	4th Tu	7:00pm	Thornhill Library, 12863 Willowyck	314-991-4399
Nov 25	Kansas City, MO	97–MIZOG	last Tu	7:00pm	TWA Bldg, Floor 5, 13th & Baltimore	913-722-3349
Dec 8	Jackson, MS	58–MCS	2nd M	7:00pm	R & D Center, 7th Fl (Ridgewood Rd)	601-825-4151
Dec 8	Charlotte, NC	71–LOGIC	2nd M	7:30pm	Home Federal S & L Carmel Rd	704-377-1154
Dec 11	High Point, NC	107–TROGIC	2nd Th	7:30pm	High Point College Room 2 (Ground fl) Wrenn Bldg	919-766-5530
Nov 17	Raleigh, NC	8–ROCC	3rd M	7:30pm	Please call for location	919-782-9576
Nov 18	Fargo, ND	117–O/KUG	3rd Tu	7:00pm	Civil Engineering Bldg, NDSU-Rm 216	701-282-5359
Dec 9	Lincoln, NE	39–Lincoln LOG	2nd Tu	7:30pm	Friendly Computer, 5530 "O" Street, Lincoln, NE	402-761-3393
Nov 19	Linden, NJ	138–JOG	3rd W	7:30pm	No. Jersey Christian Academy, Greir Ave	201-272-2073
Dec 4	Albuquerque, NM	127–AGOG	1st Th	7:00pm	Confirm	505-268-3606
Nov 20	Albuquerque, NM	127–AGOG	3rd Th	7:00pm	Confirm	505-268-3606
Nov 19	Las Vegas, NV	25–VOG	3rd W	7:00pm	Confirm	702-452-2544
Dec 9	New York, NY	135–NYOUG	2nd Tu	7:00pm	NYU main bldg, Rm714 (32 Waverly/31 Washington)	212-594-5976
Dec 7	Liverpool, NY	82–SOUP	1st Su	2:00pm	8371 Redwing Dr	315-622-9209
Dec 10	W Hempstead, NY	88–LION	2nd W	7:30pm	Adelphi Univ. Cont. Ed Center, Rm 110, Eagle Ave	516-781-2888
Dec 2	Buffalo, NY	129–	1st Tu	7:30pm	Buffalo St College, Comm Center, Bldg. 24	716-838-6893
Dec 9	Rochester, NY	132–FROG	2nd Tu	7:30pm	Monroe County Coop Extension Ctr, 249 Highland Ave	716-232-7272
Nov 19	Rye, NY	104–WOG	3rd W	7:15pm	Westchester Federal Savings Bank, 67 Purchase St	914-725-1098
Dec 10	Cleveland, OH	75–COG	2nd W	6:30pm	United Way, 3100 Euclid Ave	216-888-2078
Dec 1	Oberlin, OH	9–"Ob"Os	1st M	7:30pm	Oberlin College, Rice Faculty Lounge, West College St	216-775-8706
Dec 8	Uniontown, OH	44–AKCAN	2nd M	6:30pm	13100 Cleveland NW (office of Martin Olson)	216-837-8926
Nov 18	Cincinnati, OH	27–COG	3rd Tu	6:30pm	Central Service, 555 Gest St	513-232-4076
Dec 13	Mt. Washington, OH	27–COG	2nd Sa	2:00pm	Confirm	513-232-4076
Nov 22	Mt. Washington, OH	27–COG	4th Sa	2:00pm	Confirm	513-232-4076
Dec 11	Cincinnati, OH	27–COG	2nd Th	7:30pm	Confirm	513-232-4076
Dec 2	Dayton, OH	79–DOUG	1st Tu	7:30pm	St. Paul's Episcopal Church, 33 West Dixon Ave.	513-293-9061
Dec 11	Oklahoma City, OK	67–OKCPM	2nd Th	7:00pm	OSU Tech Center, NW 10th & Portland Ave	405-360-2141
Nov 27	Tulsa, OK	51–OUT	4th Th	8:00pm	Sheridan Library, 62 North Sheridan	918-587-3918
Call	Ashland, OR	54–RVOG	????		Confirm	503-773-1222
Nov 26	Portland, OR	57–PMS	4th W	7:30pm	Bonneville Power Ad Aud, 1002 NE Holladay St	503-228-6345
Dec 7	Eugene, OR	128–LOCUG	1st Su	7:00pm	Please call for new location	503-747-8242
Dec 13	Lansdale, PA	121–PhROG	2nd Sa	9:30pm	Merck, Sharp & Dome, Sumneytown Pike	215-648-5862
Nov 23	Pittsburg, PA	50–TROG,PA	4th Su	2:30pm	Duquesne Univ, Mellon Sci Bldg, 600 Forbes Ave	412-661-2446
Call	Lancaster, PA	74–L-MUG	????		Confirm	717-285-4940
Nov 20	Lemoyne, PA	92–MIDPOG	3rd Th	7:30pm	One Stop Computer Shop, 65 North 5th St	717-763-7074
Nov 25	Greenville, SC	41–POGO	4th Tu	6:30pm	C Douglas Wilson Bldg Basement Rear, 201 E North St	803-233-3434

Continued next page

Date	City	Group	Day	Time	Meeting Address	Contact No.
Nov 19	Oakridge, TN	13–SMOG	3rd W	7:00pm	(odd months) ECS, 136 Fairbanks Road	615-483-6857
Dec 17	Knoxville, TN	13–SMOG	3rd W	7:00pm	(even months) 11505 Kingston Pike	615-483-6857
Nov 27	Nashville, TN	119–MIDTOG	4th Th	7:00pm	Cumberland Museum, 800 Ridley Blvd	615-244-5343
Nov 25	Memphis, TN	15–MOG	4th Tu	6:00pm	Poplar/White Station Library	901-358-8128
Nov 20	College Station, TX	43–AGGNOG	3rd Th	5:30pm	Texas A & M Univ, Blocker A&A Bldg, Rm 503	409-845-7770
Nov 19	Austin, TX	7–AEIOU	3rd W	6:30pm	Old Quarry Library, 7501 Village Center	512-836-3010
Nov 21	Houston, TX	76–OUCH	3rd F	7:30pm	U of Houston, 101 Farish Hall Kiva Rm, Cullen Blvd	713-931-1096
Dec 13	Houston, TX	108–CLOG	2nd Sa	9:00am	Confirm	713-482-7877
Dec 14	Amarillo, TX	28–POG	2nd Su	2:30pm	Amarillo Public Library	806-355-7509
Nov 23	Amarillo, TX	28–POG	4th Su	2:30pm	Amarillo Public Library	806-355-7509
Dec 8	Lubbock, TX	134–LOG	2nd M	7:30pm	WC TexasTech Law School Bldg, 19th/Hartford, Rm202	806-742-3920
Nov 19	Provo, UT	30–KAOS	3rd W	7:00pm	488 S. 500 W.	801-225-8293
Nov 20	Salt Lake City, UT	105–SMOG	3rd Th	6:00pm	Sofshop, 2166 Highland Dr	801-268-2831
Nov 15	Norfolk, VA	78–TOG	3rd Sa	9:00pm	ECPI, 3661 Virginia Beach Blvd	804-497-5556
Nov 20	St Croix, VI	70–ST. COUG	3rd Th	6:30pm	St. Croix County Day School, Library	809-778-6651
Nov 19	Seattle, WA	99–SKOG	3rd W	7:30pm	WC Highline Comm College, Gold Rm, Bldg. 4	206-824-3843
Dec 2	Seattle, WA	112–OEUG	1st Tu	7:00pm	NW & Alaska Fisheries Ctr, 2725 Montlake Blvd East	206-232-2763
Dec 1	Tacoma, WA	72–TOG	1st M	7:00pm	WC Parkland Library, 404 Garfield South	206-752-5582
Dec 3	Spokane, WA	123–SMUG	1st W	7:00pm	123 ARTS Bldg, S 123 Madison	509-922-1346
Dec 11	Richland, WA	19–TROG, WA.	2nd Th	7:00pm	Richland Public Library, Swift & Northgate	509-967-2430
Nov 17	Milwaukee, WI	22–MILWOG	3rd M	7:00pm	UWM-Engineering Building Room E495	414-255-0440
Nov 19	St. Albans, WV	59–Valley FOG	3rd W	6:30pm	Public Library, 6th Ave & 4th Str	304-727-8716
Call	Calgary, Alta	94–COUG	????		Confirm	403-239-5685
Dec 10	Vancouver, B.C.	17–VPCC	2nd W	7:30pm	Hastings Community College, 3096 E. Hastings St	604-298-6990
Nov 18	Victoria, B.C.	48–VICOG	3rd Tu	7:30pm	Canadian Forces Base Esquimalt	604-383-1512
Dec 8	Edmonton, Alb.	45–KOG	2nd M	7:30pm	Alberta Vocational College, 10215-108 St	403-464-5088
Nov 24	Toronto, Ont.	120–OUCT	last M	7:00pm	Parkdale Library, 1303 Queen St W	416-533-1531
Nov 18	London, Ont.	95–LOG	3rd Tu	7:30pm	UWO, Elborn College (Libr & Info Sci) Rm 2130	519-434-1944
Dec 4	Westmount, P.Q.	73–MICROCOZM	1st Th	6:30pm	Hillside Armoury, 3 Hillside Lane	514-932-4164
Nov 20	Westmount, P.Q.	73–MICROCOZM	3rd Th	6:30pm	Hillside Armoury, 3 Hillside Lane	514-932-4164
Nov 23	Ashburton, Aust	131–VOUG	4th Su	2:00pm	(odd months) Ashburton Public Library, 152 High St	03-818-5062
Call	Denmark	126–FORMICRO	????		Confirm	45-163-1760
Call	Paris, France	110–OUF	????		Confirm	43-44-82-65
Dec 4	HodHasharon, Israel	33–IOUG	1st Th	6:30pm	21 Hankin Str, Magdiel	0-523-4043
Dec 9	Mangere,NewZealand	53–NZOG	2nd Tu	8:00pm	Univ. of Auckland, Human Sci Bldg, Rm 336	09 275-4310
Dec 3	Wellington, NewZea	109–CROG	1st W	7:30pm	Cafeteria of Trade Span (NZ) Ltd., 300 Taranaki St	640-479-1172
Nov 18	Edenvale, So Africa	90–JOG	3rd Tu	6:30pm	Civic Center	011-51-6304
Nov 19	KaiserslItern, W.Ger	62–FROG	3rd W	7:00pm	Ramstein Air Base, Ramstein Rec Center	496-305-224
Dec 12	Hattersheim, W. Ger	24–AGOG	2nd F	7:00pm	Hattersheim Posthof	061-52-4210
Call	West Germany	36–CCD	????		Confirm	07-304-3274
Call		85–MIST	????		Confirm	303-450-9608
Call		96–ERC-OUG	????		Confirm	301-937-7954

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This listing of the **FOG** Remote Systems includes only those systems which were operating as of September 10, 1986. If you find that one of these systems is not operating (especially if you get a voice line when calling), please let us know. Systems with hard disks (*see* the Size column) usually have the **FOG** disk library for downloading. Many SysOps also provide technical assistance for their users.

System name	Baud	Hours	Size	Location	Sponsoring A.M.O. (Affiliated Member Organization)	SysOp	Phone No.
FOG # 1	3/12/24	24 hrs	47Mb	Daly City, CA		Gale Rhoades	(415)755-2030
FOG # 4	3/12/24	24 hrs	92Mb	Belmont, CA		Roy Robinson	(415)591-6259
FOG # 6	3/12/24	24 hrs	11Mb	Daly City, CA		Jack Brown	(415)755-8315
FOG #10	3/12/24	24 hrs	20Mb	Harrisburg, PA		George Peace	(717)657-8699
King's Mountain	300/1200	24 hrs	20Mb	Woodside, CA		Troy Soult	(415)851-7732
Constitutional Pathway	300/1200	24 hrs	45Mb	Oklahoma City, OK	Oklahoma CP/M Users' Group (AMO #67)	Whitney Boutin	(405)848-5317
FOG #14	300/1200	24 hrs	10Mb	Urbana, IL		Jonathan Block	(217)344-4032
FOG #15	300/1200	24 hrs	94Mb	New York City, NY	New York Osborne Users' Group (AMO #135)	Livingston Hinkley	(212)489-7370
TUG-Net	300/1200	24 hrs	15 Mb	Chatsworth, CA	Technical User Group Network (AMO #106)	Bob Koller	(818)882-6045
Vallejo RCP/M (FOG 18)	300/1200	24 hrs	46Mb	Vallejo, CA		Ron Forsythe	(707)557-4403
Soft Stone	300/1200	24 hrs	20Mb	Louisville, KY		Curt Edwards	(502)241-4109
FOG #25	300/1200	24 hrs	21Mb	Davenport, IA	Quad City Osborne Group (AMO #102)	Matthew Reed	(319)326-3904
DeFOG's RBBS-RCP/M	300/1200	24 hrs	11 Mb	Detroit, MI	Detroit FOG (AMO #14)	Bill Rice	(313)443-0365
FOG #27	300/1200	24 hrs	10 Mb	Athens, GA	CP/M Athens User Group (AMO #81)	Bob Herrin co-SysOp: Scott Hartlage	(404)354-0662
Bar-Ken (FOG 29)	300/1200	24 hrs	10Mb	Boston, MA	Boston Osborne Group (AMO #122)	John Kinsella	(617)288-4667
MEBBS (FOG 31)	3/12/24	24 hrs	22Mb	Burlingame, CA		Jim Switz	(415)692-1406
FOG #33	300/1200	24 hrs	20Mb	Oakland, CA	East Bay FOG (AMO #3)	Kenji Nakadegawa	(415)655-1206
FOG #38	3/12/24	24 hrs	45Mb	Newark, CA		Gerald Wright	(415)792-3481
SMOG3 (FOG 40)	3/12/24	24 hrs	22Mb	Menlo Park, CA	SMOG3 (AMO #68)	Philip A. Moore	(415)323-4579
FOG #41	300/1200	24 hrs	10Mb	Elizabeth, NJ	Jersey Osborne Group (AMO #138)	George Porcella	(201)467-2739
FOG #45	300/1200	24 hrs	21Mb	Colorado Springs, CO	Colorado Springs Osborne Group (AMO #133)	Ken Moon	(303)471-2415
CFOG #2	3/12/24	24 hrs	10Mb	Chicago, IL	Chicago FOG (AMO #80)	Bill Kuykendall	(312)235-7902
Ozzie's FIDO	300/1200	24 hrs	21 Mb	Roxboro, Quebec		Rene Champagne	(514)684-4922
Emerald Lake (FOG 48)	3/12/24	24 hrs	96Mb	Redwood City, CA		Dick Worth co-Sysop: Rich Skalsky	(415)365-2650
FOG #49	3/12/24	24 hrs	23Mb	Wycoff, NJ		Peter Zuroff	(201)848-8217
Onyx RCP/M	300/1200	24 hrs	47Mb	Regina, Sask		Cris Ball co-SysOp: Roland Stoneham	(306)949-1564

* *

Notice: The **FOG** office is open 10am to 5:30pm (Pacific time) Monday through Friday for calls from members. At most other times, a voice-activated answering machine (speak as long as you wish) is on the line. We will gladly refer you to the nearest local group, take a change of address or merchandise order, or answer most technical support questions. The phone number is (415) 755-2000.

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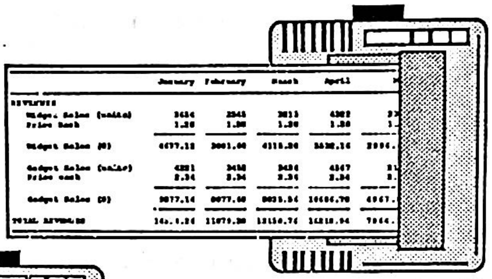

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(From page 30.) Includes a glossary and a bibliography. An NBS study. 1984, 143 p., il. S/N 003-003-02560-7. $4.25.

Selection of Microcomputer Systems. This NBS booklet assists end-users with evaluating the applicability of microcomputer systems technology to their needs and selecting a system to meet those needs. 1984, 30 p. S/N 003-003-02553-4. $1.50.

Starting and Operating a Microcomputer Support Center. Describes requirements for staffing, space, equipment, software and operating policies for establishing a microcomputer support center. NBS. 1985, 40p., $1.75. S/N 003-003-02683-2. $1.75.

Networks

Local Area Networking. Report of a 1977 NBS work shop convened to discuss the different technologies applicable to computer networks serving a limited geographic area, such as a single campus, factory or office complex. 1978, 74 p., il. S/N 003-003-01918-6. $5.

Selection of Local Area Computer Networks. Outlines the features available in contemporary local-area computer networks, including distinctions between computer applications, topology, protocol architecture, and transmission media. 1982, 133 p., il. S/N 003-003-02451-1. $6.

Programming

Almanac for Computers. Provides astronomical data in a format for small computers and calculators used in navigational and positional astronomy. Concise mathematical expressions are used to represent the coordinates of celestial bodies for specific intervals of time. These mathematical expressions are approximations which allow direct calculation of astronomical and navigational data for specific times and conditions. 1985, 100 p. S/N 008-054-00122-0. $3.50.

Computer Model Documentation Guide. Provides guidelines for preparing documentation for computer models. Based on a similar document prepared for use by the Air Force in support of military analyses. 1981, 55 p., il. S/N 003-003-02282-9. $4.50.

Economic Analysis Procedures for ADP. Designed for the novice in the field of cost/benefit analysis, this publication establishes a procedural routine for conducting economic analyses. Material is developed slowly from a few very basic economic and common-sense principles. 1980, 238 p., il. S/N 008- 040-00091-5. $7.50.

Introduction to Number Systems, Boolean Algebra and Logic Circuits. A Navy Electricity and Electronics Training Service manual. 1979, reprinted 1981, 103 p. S/N 008-047-00312-9. $5.50.

Introduction to Programming in BASIC. This is a Naval Rate Training Manual that is designed for individual study. Provides a hands-on introduction to programming and the BASIC programming language. Each chapter includes exercises and suggested solutions. 1985, 184 p., il. S/N 008-047-00382-0. $4.50.

NBS Minimal BASIC Test Programs - Version 2, User's Manual. Vol. 1, Documentation. Describes the set of programs developed by NBS for the purpose of testing how the computer language BASIC conforms to the American National Standard (ANSI) for Minimal BASIC, ANSI X3.60-1978. 1980, 76 p. S/N 003-003- 02262-4. $5.

NBS Minimal BASIC Test Programs - Version 2, User's Manual. Vol. 2, Source Listings and Sample Output. Source listings and sample output from the set of programs developed by NBS for testing how the computer language BASIC conforms to the ANSI X3.60-1978, Minimal BASIC standard. 1980, 483 p. S/N 003-003- 02263-2. $10.

Principles of Digital Logic. This Navy Rate Training Manual provides a background in the principles of logic circuits, Boolean algebra, and number systems that are necessary to understand digital computers. 1979, 76 p., il. S/N 008-047-00276- 9. $4.75.

Selection and Use of General-Purpose Programming Languages: Vol. 1, Overview. The presentation of a survey of selection factors for the major programming languages: ADA, BASIC, FORTRAN, C, COBOL, PASCAL and PL/1. Factors covered include logical operations within each language, the advantages and disadvantages of software packages, microcomputers and standards. NBS. 1984, 80 p. S/N 003-003-02612-3. $3.

Selection and Use of General-Purpose Programming Languages: Vol. 2, Program Examples. Gives program examples to illustrate the features of the major programming languages described in Vol. 1. NBS. 1984, 180 p. S/N 003-003-02613-1. $5.50.

Software

Computer Software Management: A Primer for Project Management and Quality Control. This NBS guide gives the reader an appreciation of the software pitfalls in computer projects and explains the use of quality controls and software management methods. 1977, 49 p., il. S/N 003-003-01795-7. $4.25.

Executive Guide to Software Maintenance. This NBS booklet answers key questions about software maintenance. Issues addressed include the feasibility and applicability of software use, development of maintenance software and improvement of existing software. 1985, 28 p. S/N 003-003-02685-9. $1.

Guidance on Software Maintenance. Addresses issues and problems of software maintenance and suggests actions and procedures that could help software maintenance organizations meet the growing demands of maintaining existing systems. 1983, 72 p. S/N 003-003-02535-6. $2.50.

Introduction to Software Packages. An introduction to applications software packages. This book encourages the use of software packages as an alternative to in-house development and directs potential users of software packages to sources of useful information. 1984, 61 p. S/N 003-003-02569-1. $2.25.

Management Guide for Software Documentation. An NBS publication intended to assist managers in the establishment of policies and procedures for effective operation, distribution, control, and maintenance of documentation which will aid in re- use, transfer, conversion, correction and enhancement of computer programs. 1982, 44 p. S/N 003-003-02384-1. $3.

Microcomputers in Transit: A Hardware Handbook. A handbook intended for management and staff of small to medium-sized transit agencies prepared at the Indiana University Institute for Urban Transportation. Describes the functions of each computer hardware component and the characteristics to look for in selecting equipment for small to medium-sized transit operations. 1984, 71 p. S/N 050-000-00505-4. $3.

Microcomputers in Transit: A Software Handbook. A companion volume to the *Hardware Handbook* by the Indiana University Institute for Urban Transportation. Describes the types of computer programs available for use in the transit industry and programming languages as well as documenting applications of some common programs. 1984, 291 p. S/N 050-000-00506-2. $7.

Software Tool Evaluation and Selection Guidelines. Provides the working programmer with a technical approach to software evaluation in test and work environments. Software selection and installations are also discussed. 1984, 171 p., il. S/N 022-001- 00134-1. $6.50.

The Computer and Software Industries

Competitive Assessment of the U.S. Software Industry. Describes and defines the software industry from several different perspectives and discusses the economics of this industry, its past U.S. performance, and the past U.S. competitive position. This report also discusses the factors affecting past and future U.S. competitive positions and provides both near and long-term forecasts for the industry. 1984, 109 p., il. S/N 003-009-00436-5. $4.50.

High Technology Industries: Profiles and Outlooks, the Computer Industry. Contains statements and papers from a series of meetings held by the Secretary of Commerce in 1983 to assess future problems in U.S. high technology competitiveness. Includes a study of the comparative position of the U.S. computer industry and presentations by executives of four corporations. 1983, 70 p., il. S/N 003-009- 00360-1. $4.50.

U.S. High Technology Trade and Competitiveness: Staff Report of the Department of Commerce International Trade Administration. This report notes that the U.S. has long been the global high technology leader but finds that several foreign competitors are now strongly challenging the U.S. leadership position. 1985, 86 p., il. S/N 003-009-00451-9. $3.

Word Processing

Simplified Methods for Evaluating the Cost-Effectiveness of Word Processing Equipment. Provides an organization with two simple and inexpensive methods for determining whether or not word processing equipment is justified: "Machine in Use Observation" and "Typeset Lines Analysis." 1985, 32 p., il. S/N 022-001-00137-6. $1.25.

* * * * * * *

.LBR File Transfers

by Jim Holmes

Recently I had to transfer a great number of files from one disk format to another as our resident dBASE expert has "gone DOS", but hasn't yet purchased a utility like MEDIA MASTER.

Since I have, it fell to me to make the copies, involving about 30 disks, single AND double density.

MEDIA MASTER handles the file transfers perfectly, of course, but I also found NSWP207 and NULU15 (on the Starter Disk) of great help in collecting files which "go together" and in saving disk space wherever possible.

Any time you undertake a project which could involve several hours work, take a few minutes at the outset to outline it; you'll find it will save time in the long run. For example, I knew the DOS 2.0 format I was transferring TO had only 175K of disk "space" available. Some of my Osborne DD disks had more data on them than that . . . and I had SD disks (with less than 90K) to copy as well.

I decided to use NULU15, to collect all files on a disk into a library file.

For those who've never used them, library files all have the extension .LBR.

How they're assembled is a discussion beyond the scope of this article (and my understanding) but they ARE a means of organizing OTHER files for storage or transfer purposes. You might call them the "Mayflower Movers of Media".

As well as keeping files together, .LBR files save disk space. For example, a disk name file likely has just 12 characters (as per -dskname.nnn), but requires at least 128 (the smallest disk segment CP/M will let you "reserve") . . . and that's in an .LBR file.

The same file uses 1,024 characters (1K) on DD Osbornes, and needs 2,048 on a SD system! Further, a 183K DD disk with lots of small files (less than 1K) would be "full" with only 64K used; that's the limit for number of entries in the disk directory. With a .LBR file, only ONE entry is used, regardless of how many "members" it contains!

Still more space can often be saved by "squeezing" files. Again, I can't explain the process in detail, but it may result in a space saving of as much as 30-40 percent, depending on the "empty" spaces, etc., in the (pre-squeezed) file.

Several utilities for squeezing/unsqueezing exist but I prefer NSWP207 FOG Starter Disk). It does this job and many others very well. You could "squeeze" the .LBR file(s), but I recommend against that.

If instead you squeeze the files contained WITHIN the library, you can use DIRectory programs (like SD, for example – FOG-CPM/015) which list library "members": LRUN.COM will let you RUN a .COM file (unsqueezed), even from within a library.

The only program not in the public domain is MEDIA MASTER, which costs $39.95! The documentation for all programs is good, and each is easy to learn and use.

The best testament to these programs' value is that I was able to transfer the files (from that original "set" of 30 disks) I'd begun with to just seven disks, with room to spare.

I didn't have to worry about identifying files that "go together", or about changing names of files that SOUND like they belong in a "set", but don't.

* * * * * * *

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The Usefulness of Scratch Fields in dBASE II

by Michael Gemignani

When constructing dBASE II files, I often include one or more scratch fields. These are numerical fields; I usually allow for nine digits with two decimal places, but the scratch fields can be configured in whatever manner is likely to enable them to meet any needs that are likely to arise.

The scratch fields – normally I call them SCRATCH1 and SCRATCH2, are – as the name implies, simply scratchpad storage to hold whatever you want them to at any given time. There are three primary uses to which I put them.

Sorting

Sorting in dBASE II can only be done on the contents of a field. You cannot sort, say on the sum of two fields unless there is a field to hold that sum. That is precisely the situation in which scratch fields come in handy. You compute the value on which you want to sort, say three times the average of two other fields, and store the result in a scratch field. You can then sort on that scratch field.

Intermediate Results

The entry for one field is sometimes computed from several other values, some of which you may want as entries in fields and some of which may not want to save permanently. Suppose, for example, one field is to contain the retail price for each item sold in a particular store, and another field contains the wholesale price, but there is no need for a permanent field which contains the percentage of markup for each item.

When the data base is initially constructed, a scratch field could be used to store the percentage which an item is to be marked up over wholesale. That scratch field could then be used to compute the retail price. The appropriate command would look something like:

```
.REPLACE ALL RETAIL WITH WHOLESALE•(1 + SCRATCH1/100)
```

Modeling

Scratch fields can be used to construct "what if" situations without disturbing the other fields of a record.

If you want to know what the profit would be if the price were increased 35 per cent, then you can use a scratch field to store the new price (computed, of course, from the old) and another scratchfield to store the new profit.

You can revise the scratch fields again and again without changing any data in your basic fields.

In sum, scratch fields are a useful device in many circumstances.

They have helped me avoid having to modify the structure of a data base and provided me with great flexibility in exploring the information that the data base can provide.

* * * * * * *

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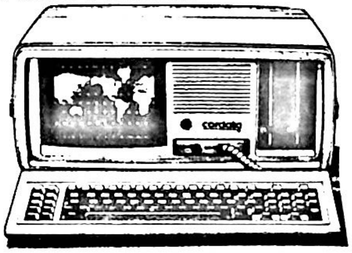

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Printing Business Forms

by Mark Sevi

In the April 1986 **FOGHORN** (page 54), there was an article written by Ed Lukert concerning business form printing.

In one portion he mentions getting printer control characters to the printer via the ? or PRINT command and sending data to be printed via the @ SAY command.

There may be a problem with this method that I can help with.

Sending text to the printer using the ? command requires you to also SET PRINT ON to activate the printer.

Use of the @ SAY command also requires the SET FORMAT TO PRINT command when outputting to the printer.

A conflict can occur within the software when both the SET PRINT ON and SET FORMAT TO PRINT commands are used together.

Typical examples of this are continuous form feed of blank paper, wild printing results of some data or plain old printer and computer lock up.

This conflict can occur in all versions of dBASE II.

To be on the safe side, instead of Ed's recommendation of using the ? command to send the printer control codes and the @ SAY command to send the data, use of the @ SAY command is all that is needed.

Eliminate the ? and SET PRINT ON commands entirely.

```
SET FORMAT TO PRINT

@ 1,0 SAY CHR()+CHR()
– send control codes to printer
@ 1,5 SAY 'data'

SET FORMAT TO SCREEN
```

The printer control codes are outputted at 1,0 and the text or field variables are sent to wherever you want the text or field variable to appear.

In some instances you can combine the commands to lessen the size of the command file.

```
SET FORMAT TO PRINT

@ 1,4 SAY CHR()+CHR(), 'data'

SET FORMAT TO SCREEN
```

The best way to find out which method works best for you is to try it and see if your printer has all the bells and whistles necessary to interpret the @ SAY commands correctly.

Unless you are stuck with a printer that is 10 years old (as I am) that doesn't have the sense to do anything but print slowly and methodically and then only when the current month has an R in it, the above examples should work to perfection.

If a problem of placing the data exactly where you want it does occur because of the printer control codes being output to the same line as the proposed data:

```
@ 2,0 SAY CHR()+CHR() @ 2,0 SAY 'data'
```

or

```
@ 2,0 SAY CHR()+CHR(), 'data'
```

simply pick a blank line (one that doesn't have text of data being sent to it) somewhere before the data is to be placed and use the @ SAY command to 'print' the control codes there.

```
@ 1,0 SAY CHR()+CHR()
 – send the printer codes to blank line
@ 2,1 SAY 'data'
 –send the data to exactly the right place.
```

* * * * * * *

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dBASE Tips

by Kaypro User Group members

NOTE: in all examples, n *represents a numeric expression, variable, or constant integer. Also, a period preceding a command represents the dBASE "dot prompt". For commands which have multiple options, bracketing is used for clarification; you should not enter these brackets when using the commands. If an option has a subset of options, the secondary options are separated with slash marks.*

Printing Out dBASE II Files

(From the Edmonton KUG): Although dBASE is not the easiest program to learn, it is very powerful. . One way this is shown is by the number of ways output can be generated.

1) *Display [off] [fieldname, fieldname] [all/ record n/ next n/ for fieldname="matching phrase"]*

This basic CP/M method (either SET PRINT ON before starting this command or enter a ^P before pressing the ↵) gives an unformatted listing of the fields and/or records specified. For many, it is probably only useful for very short files and/or when hard copy of a particular record is need in a hurry. Since it only gives the contents and not the field names or titles, its usefulness decreases as the number of fields in the .DBF file increase unless you limit the number or size of fields displayed.

You may limit the size of a field as it is displayed either by using the substring, eg:

$(fieldname,start-character,last-character)

or the TRIM functions. Using the OFF option omits display of the record number (very handy if you use the record number as part of one of the fields being displayed).

Be careful when using the FOR option. Only those records where the named field EXACTLY matches the defined string will be displayed. If you are not sure whether upper or lower case was used, force the match into upper case using the ! command:

FOR !(fieldname)="MATCHING PHRASE"

Similarly, punctuation and spacing in the "matching phrase" is important. The shorter the string in the "matching phrase", the more frequent the match.

2) *Report form [form-filename-to-print]*

The standard means by which to printout .DBF files. After interactively setting up the options, the above command gives the user a printout with column headings and aligned fields of data. At the user's option, he or she can get titles, subheadings, column totals, etc. The advantages of this method are that it is relatively straightforward, well documented and provides output in a reasonably well set up form.

The main drawback is that although it works well with any number of records, a large number of fields will likely necessitate splitting the output of data into more than one form. This is easily seen by considering that the total number of data fields can be much larger than the total number of columns on the paper on which it is to be printed. This problem is partially alleviated by the word wrapping feature for character data.

3) LABELGEN

Many of the dBASE II packages bundled with the Kaypro and other computers (or shipped to users ordering upgrades) came with a number of auxiliary programs. Included among these was dGEN, a software package designed to interactively work with the user in producing menus, labels, editing forms and regular report forms. LABELGEN need not only be used to produce mailing labels, but it can also be extended to print out more general files. The procedure is written up in the second part of the dBASE II manual.

The resulting output from this method can contain both field labels and their contents, spaced about the form as one wishes. Data from each record can be kept together, occupying as many lines as necessary. The main disadvantage of this procedure is that it accepts numerical data grudgingly, (it won't accept the STR function). Interactively, only one numerical data field is accepted per line.

4) ZIP

One of the easiest and most powerful methods to use. Designed to allow output of up to 88 lines per page. Form design is very easy as you just type in on the screen what one wants and where one wants it. The only disadvantage of the method is that no indication is given as to how to get more than one record printed out on a single page.

5) Development of a dBASE program

Acquiring some knowledge of dBASE programming and using programs others have written as models is all that is necessary to produce custom designed printer output. Many users find that getting the basic design from LABELGEN or ZIP and then modifying the resulting command file is the quickest and easiest way to learn more about dBASE.

Insert Warning

(by Charlie from *Orange Bytes* Newsletter): A bug has been detected using the Insert command. It can result in the loss of data record if a carriage return is issued at the wrong time. (Ashton Tate knows about it but has no solution yet.) So they recommend you do not use INSERT and INSERT BEFORE.

Case in point: if you have issued the Insert command after indexing to some intermediate record in your data base, you are presented with the standard data input screen with the cursor in the first position of the first field.

If you enter data at this point, everything seems to work as advertised. But if you should happen to enter a carriage return (thinking perhaps, to move the cursor to the second field), you are dumped out of the Insert mode only to find that the record count in your data base has been incremented by one.

Further inspection reveals, however, that the "plus one" count is the result of two events:

1. The record following the intended insertion point has been triplicated, and
2. The next record has been deleted. And evidently, not by a " * " but completely overwritten. The missing record cannot be recovered.

Goof Hint

(by Charlie for Charlie): I was going to update information in my Name/Address data base when I accidently entered an *UNKNOWN CONTROL CHARACTER* into my file and it got written to the data base. I had 272 records in my DBF file when I started but after that goof I got an *OUT OF RANGE* error after 24 records.

After two lousy hours of research and trial/error I finally got it back on track. In my efforts, I learned a lot about things I really have no need for but what can I say, maybe some day. Anyhow, nothing worked, either in the DBF or NDX until

1. I added a new record,
2. Erased the NDX and then
3. INDEX again.

The data base seems to be OK now. The error evidently changed the total record stored somewhere (I never found out where) but the 272 records was always in the DBF file.

Safety Hint

If after working on your DBF file you want to use *PACK*, it may be wise to force a write to the disk (*USE datafile* or *QUIT* and restart dBASE).

[This problem is directly related to the 2.3b version of dBASE. The best solution is to upgrade to 2.43. Also, please remember that PACK does not restore the disk space, it merely makes sure you never again see deleted records. To increase available disk space, copy the file to a temporary file, delete the old file and rename the temporary file. Either method should only be used after you have made a backup disk. – Gale Rhoades]*

dBASE II Processes I Can Never Remember

(by P. Garey, Olympia KUG): These are routine commands to make things work in dBASE in the interactive mode.

COPY

Using a part (only) of a file to alphabetize only a section of it.

```
.USE filename↵
.COPY TO PARTIAL FOR LNAME = 'CULLERS'↵
.USE PARTIAL↵
.SORT ON FNAME TO PARTIAL2↵
.USE PARTIAL2↵
```

DISPLAY

DISPLAY FOR LNAME = 'Garey'↵ shows all fields for all records which have an exact match to the characters enclosed in quotes.

dBASE to WordStar (version 2.3b only)

```
.USE filename↵
.COPY TO filename.ext SDF DELIMITED↵
```

This creates a non-document WordStar datafile for MergePrinting or similar operation. This also permits transfer to a wide variety of other programs. All trailing blanks are included in the transfer so some editing may be necessary. Note that the file extension should NOT be .DBF.

dBASE to WordStar (all versions EXCEPT 2.3b)

```
.USE filename↵
.COPY TO filename.ext DELIMITED WITH "↵
```

This creates a non-document WordStar datafile for MergePrinting or similar operation. This also permits transfer to a wide variety of other programs. Nearly all trailing blanks are deleted so little, if any editing will be necessary. Note that the file extension should NOT be .DBF.

WordStar to dBASE

Write the file as a non-document Merge File or strip the high order bit with PIP [Z] or one of the public domain utilities. Let's assume we call the datafile MERGE.DAT.

```
.USE↵
.APPEND FROM MERGE.DAT DELIMITED↵
```

LIST

This command can either be used to find out a few facts about the data files on the disk or to find out what files are on the disk. Using this command before creating a new or temporary file will prevent destruction of a needed file.

To find the .DBF files on a disk:

```
.LIST FILES↵
```

To find all the files on a disk, dBASE or not:

```
.LIST FILES LIKE *.*↵
```

To find only files with a given extender:

```
.LIST FILES LIKE *.TXT↵
```

Long Command Lines

(Fran Klipp): Have you ever discovered the hard way that dBASE won't accept your command line just because you could not squeeze it into a single physical line on the screen?

A semi-colon at the end of a command line tells dBASE to accept what follows as a continuation of the same line.

How to Get a CHR(n) to Work in dBASE

(from Victoria, CPMUG):

For example, to Bold Face a line, try the following technique:

SET PRINT ON↩
?? CHR(n) + CHR(n)↩

You would replace the *n* with the decimal value for the bold face printer control code. Consult your printer manual for this number.

[Reproduced from K>BYTE.]

* * * * * * *

dBASE II Offering

by Mark Sevi

In the April 1986 **FOGHORN**, there was an article by Veikko Rekunen on dBASE II under the **Programmer's Toolbox** column. Mr. Rekunen states his astonishment that a command file written and run under version 2.3b does not run under version 2.41.

Without seeing the entire command file and data base structure it is difficult to ascertain exactly what the problem might be but three things stand out as being probable.

The first is that if memory variables are stored in a disk file (.MEM), they must be freshly created when the command file is used with a new version of dBASE II. (This is necessary *only* when going between versions 2.3xx and 2.4xx, not when going between versions 2.4 and 2.43*.)

The second is the mixing of the SET PRINT ON and SET FORMAT TO PRINT commands which is not recommended with any version of dBASE II. The use of these two commands together can cause internal conflicts. It would be better to use either/or and not both.

CHR( ) codes can be sent to the printer without the use of the ? (PRINT) command. Using SET FORMAT TO PRINT and @ row, column SAY CHR( )+CHR( )+CHR( ), etc., is easier when you want to pinpoint placement of your data. You can direct the printer control codes to almost anywhere there is a blank space in your printed form.

The third problem could be an error in logic. Mr Rekunen sets a variable ROW to an initial value of 26. After this he is adding either 5 or 6 to this original value if certain conditions are met.

After several loops through the print cycle his variable ROW could possibly equal 90 or greater.

When you tell dBASE II to @ *90,5 SAY* something, strange things happen because most printers do not have a 90th row.

It would be better to reset his variable ROW each time through the loop to assure it does not accumulate too great a value.

In this particular case, if Mr. Rekunen would like to send me his original command file, data base structure, a copy of the meanings of the printer control codes he is using and a short explanation of what he is trying to accomplish care of the **FOG** office, I'd be glad to rewrite the command file to take maximum advantage of the @ *SAY* commands.

* * * * * * *

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HANDY ITEMS WHEN WORKING WITH A LANGUAGE OF YOUR CHOICE

CP/M Assembly Language
Part II: The 8080 CPU

by Eric Meyer

Last time we discussed the assembler itself, some basic assembler directives, and their use in patching (modifying) existing programs. Now we'll begin to investigate writing our own programs, which will first require learning something about the 8080 chip itself. We will be using the standard Intel mnemonics for 8080 instructions.

(All of what follows will apply equally well to the Z80, which simply has more registers and instructions. Unfortunately there's a further complication: the Zilog instruction set, besides being larger, also uses different names for all the CPU instructions. We may deal with this in a later installment – for now everything applies to an 8080 assembler.)

I'm assuming you have some programming experience so won't explain such concepts as loops, subroutines, etc., though I will discuss ways in which assembly language differs from the higher level languages with which you may be familiar.

1. 8080 Registers

The first thing to become accustomed to is the idea of a register. There are no variables and types (real number, character string) in assembly language, just numerical values and the place where they are stored. At any given time, a program will have most of its data stored someplace in memory, but what it is working on immediately must be fetched into the CPU itself. The CPU contains a number of registers for this purpose. By convention they have one-letter names, and each can hold one byte of data. Often they are depicted like this:

```
+--------+========+
|   A    |   F    |
+--------+========+
|   B    |   C    |
+--------+--------+
|   D    |   E    |
+--------+--------+               +--------+
|   H    |   L    | - - - >       |  (M)   |
+--------+--------+               +--------+
```

Seven of the eight registers "A-L" are used to hold data bytes; the "F" (Flag) register serves a different purpose, which we'll discuss later.

The "A" register (accumulator) is where most of the arithmetic and logical operations take place, though it also can simply hold a byte for a while. The "B-C", "D-E", and "H-L" registers can function either separately or together in pairs to hold a word (two bytes) of data, often a memory address. The "M" register isn't really in the CPU at all – it represents the contents of the memory at the address in the H-L register pair.

Thus you can operate with a byte of data stored in memory just as you would one stored in the CPU itself, by putting its address in the H-L registers and referring to it as "register M".

Typically the H-L pair is used as a pointer in this fashion. The B, C, D, and E registers are used for a variety of tasks: as pointers, holding counter values, storing bytes temporarily.

2. The MVI and MOV Instructions

The simplest things you can do with a CPU register are put a data byte into it, and move a byte from one register to another. The MVI (move immediate) instruction puts a byte into a register: `MVI  A,13` and puts the value 13 (decimal, unless followed by "H" for hex or "B" for binary) into the A register.

The MOV (move) instruction simply moves whatever's in one register into another: `MOV  B,A` takes the contents of the A register (at the moment, 13) and puts that value in the B register too. (The A register remains unchanged.) Note that in both cases, the destination comes first, then the source. Thus you read "MOV B,A" as "MOVe into B, the value in A".

Let'consider what's going on at the gut level. The assembler will translate each "MOV" instruction into one instruction byte; e.g., "MOV B,A" turns out to be 47H. Each "MVI" is also one byte, followed by a second byte to tell it what value is being put in the register, e.g., "MVI A," is 3EH so the instruction "MVI A,13" will become the two bytes 3EH, 0DH. This is typical of how all the assembly language instructions wind up in the executable program. The sequence of hex bytes 3E,0D,47 in a COM file would, when the program runs, put the value 13 into the A register, and then into the B register too. While we will mostly be discussing things at the level of the mnemonics (like "MVI") that you write, it helps to know what's ultimately happening.

3. The LXI and XCHG Instructions

Similar instructions let you manipulate 16-bit values in register pairs though Intel mnemonics give these instructions totally different names. The LXI instruction (load index immediate) puts a word value into a register pair, referred to by the first register name: `LXI  H,801H`, loads the H-L register pair with the value 801 hex.

The high byte (08H) goes into the first register (H), the low byte (01H) into the second (L). (Note that this differs from the "backward" order in which 16-bit values are stored in memory, which we discussed last time.) In fact, you could have done exactly the same thing with the pair of instructions:

```
MVI  H,8
MVI  L,1
```

except that the "LXI" instruction makes it clearer what you're doing (and in fact takes only 3 bytes of code, as opposed to 4 for the two "MVI"s).

When you need to move 16-bit values around, you do in fact have to use pairs of "MOV" instructions, e.g., to move this value from the H-L register pair into B-C now would require:

```
MOV  B,H
MOV  C,L
```

There is one exception. There are times when you would find it convenient to exchange the contents of the D-E and H-L register pairs, and this can be done by the simple instruction XCHG.

4. The INR, DCR and INX, DCX Instructions

The need to "increment" and "decrement" (add and subtract 1) is very common. The INR and DCR instructions increment and decrement a single register, e.g., `INR  A` adds one to whatever value was in the A register previously.

A similar pair, INX and DCX, work with 16-bit values in register pairs: `DCX  H` would subtract one from the value in the H-L register pair. If H-L still contained the value 801H we put in a moment ago, it would now contain 800H, (i.e., H would still contain 08H, and L would contain 00H.) Note that this is not the same as `DCR  H` which would decrement the H register as a single byte, and not affect the L register at all. (If H-L had contained 801H, it would now contain 701H.)

All arithmetic is cyclical here: negative numbers are represented by their complements. For example, if you do this:

```
MVI  A,0
DCR  A
```

the A register will contain the value FFH, which you may interpret as either 255 or -1, depending on the circumstances. If you increment that, of course you will get zero again. Most assemblers in fact allow you to write a statement like `MVI A,-1` which is actually exactly equivalent to "MVI A,255".

5. Moving Bytes Around

It's time to see how these instructions fit together to accomplish something potentially useful. Let's consider moving several bytes of data (this could easily be text) from one place to another.

```
                ORG  0100H              ;code begins here
0100 211101     LXI  H,SOURCE           ;point to source with H-L
0103 111301     LXI  D,DEST             ;point to destination with D-E
0106 7E         MOV  A,M                ;fetch byte from memory into A
0107 EB         XCHG                    ;exchange so H-L is now dest
0108 77         MOV  M,A                ;store byte at destination
```

```
0109 EB         XCHG                    ;now H-L is source again
010A 23         INX  H                  ;point to the next byte
010B 13         INX  D                  ;and the next destination
010C 7E         MOV  A,M                ;get another byte
010D EB         XCHG                    ;switch to destination again
010E 77         MOV  M,A                ;store the byte
010F EB         XCHG                    ;switch back to source
0110 C9         RET                     ;all done, return.
0111 6869       SOURCE: DB   'hi'       ;data: the bytes we will move.
0113 3F3F       DEST:   DB   '??'       ;and where we'll put them
0115            END                     ;end of source file
```

In the middle is the source code, with comments to the right. On the left I have put the actual addresses and instruction bytes that will result. (Most assemblers can produce a "listing" [LST or PRN] file just like this, for your reference.) If you actually assembled this "program" into a COM file, it would contain the 21 bytes of instructions and data shown on the left, at addresses 0100-0115H.

What's going on here? "SOURCE:" and "DEST:" are labels – the assembler will figure out the actual addresses where they will wind up and will keep track of those (16-bit) values. When you refer to SOURCE, for example, the assembler will substitute the address of the label – in this case 0111H – so the statement "LXI H,SOURCE" is actually "LXI H,0111H". Similarly for DEST. The "DB" instruction will accept text characters in single quotes as shown. (We could have written "DB 68H,69H" instead of "DB 'hi'", since those are in fact the ASCII codes for these letters, but it wouldn't have been as clear what we meant).

Remember that the "M register" actually refers to whatever's in memory at the address in the H-L register. Putting the address SOURCE in the H-L pair automatically makes "M" refer to the byte at that address, namely the 'h'. So "MOV A,M" fetches that 'h' into the A register. Then the program exchanges D-E and H-L, so that it's now DEST in the H-L pair, and "M" refers to the byte there (the first '?'); and it stores the 'h' there. Then it exchanges back again, increments both "pointers" so that they point to the next byte of data (the 'i') and the next destination (the second '?'), and does it again. Then we're finished, and the program returns control to the operating system.

You can write, assemble, and run this little program. You might even try modifiying it, e.g., extend it to move three or four bytes instead of just two. But, it is ridiculously easy to crash your computer when doing assembly language programming, so don't leave disks in the machine that you don't have copies of, and don't be afraid to push the Reset button if disaster strikes.

If you had used some higher-level language to write something like:

```
100 DEST$="??"
110 SOURCE$="hi"
120 DEST$=SOURCE$
```

your compiler would have generated machine instructions similar to those above, but about 10 times more. (When you program in assembly language, you don't have to include a single byte that you don't need.)

This program was no big deal and nothing visible happened. But be patient; there's a lot more to learn.

LPRINT Statements

by Paul T. Jorgensen

I would like to comment on Carl Tenning's nice little program in the March 1986 **FOGHORN** (page 73) for in-program switching of LPRINT in and out in MBASIC. It is a jewel.

However the program as written assumes a parallel printer (so who uses serial?). Anyhow, in case someone does, the IOBYTE for a parallel printer is 80H (128D) or 40H (64D) for a serial printer.

If the printer IS serial, 80H must be ANDed to 40H to shift the output from the printer to the screen. Nothing less will do. For those who don't know how to find the IOBYTE and don't really care, SETUP sets the IOBYTE, 80H for parallel and 40H for serial. 'Nuff said.

for those who are having difficulty trying to use a nominal BASIC program written for some other machine or in a different dialect (of which there are many), I recommend investing in *The BASIC Handbook*, 3rd edition, *Encyclopedia of the BASIC Computer Language* by David A. Lien.

There are plentiful examples in several dialects with a most useful "if you don't have it" examples to help you out of the particular dilemma.

I am delighted that Bob Thompson and Bill Powell are finally explaining things for us ignoramuses.

* * * * * * *

Proving the Value of Pi

by Harry Pitcher

Since my college math days of years ago, I have looked for a way to prove the value of Pi as accurately as possible. Below is a BASIC program that does this. Up to a point. The smaller the value of INC that is chosen, the more accurate will be the result.

The following table shows the value of INC chosen versus the resulting value of Pi.

INC	PI
.1	3.17835
.01	3.14548
.001	3.14208
.0005	3.14179
.00001	3014221

The computer run time for an INC of .0001 was 80 minutes.

The FOR expression (line 120) functions as a definite integral. Others may find the integral approach of value in solving calculus type problems.

```
10    REM  THIS PROGRAM CALCULATES THE AREA OF 1/4 OF A CIRCLE AND
           THEN DIVIDES 4 TIMES THIS AREA BY THE RADIUS SQUARED TO
           YIELD THE VALUE OF PI.
20    REM  THE  SMALLER THE "INC".  THE MORE ACCURATE WILL BE  PI.
           BUT THE COMPUTER RUN TIME WILL INCREASE.
30    REM ****************************************
                R=RADIUS OF CIRCLE
                A=AREA OF EACH INCREMENTAL STEP
                  BOUNDED BY INC.R.X.& ARC
                TA=AREA OF 1/4 CIRCLE
                X=VARIABLE. R TO 0; ONE SIDE OF RECT.
40    REM  WHEN  "INC"  IS  SMALL.  THE FOURTH SIDE  OF  RECTANGLE
           (SHORT ARC) APPROACHES A STRAIGHT LINE.
50    PRINT
60    PRINT
70    REM ***********************************************
80    PRINT
90    PRINT
100   R=5
110   INC=.1
120   FOR H=0 TO R STEP INC
130      X=(R^2-H^2)^.5
140      A=INC*X
150      TA=A+TA
160   NEXT H
170   PI= 4*TA/(R^2)
180   PRINT PI
```

* * * * * * *

Replace AUTOST.COM With a CP/M Auto-start

by Phil Pflager

Wouldn't it be nice to have an auto-start program that doesn't take up any disk space ?

I suspected that CP/M must have provided auto-start capability but couldn't find any information on it until I came across a program for the Osborne 1 (AUTOMOD.COM) in the **FOG** library (FOG-CPM.142). It did not work on my system, but the documentation contains an addendum by Jim Woolley which describes the CP/M auto-start command line buffer.

From his description I concluded that it would be possible to modify my system tracks so that a program name, stored in function key zero, would cause that program to auto-start when the disk was booted.

It is then possible to use SETUP.COM to change the name of the program that auto-starts. To do this it is necessary to make the following changes to the system tracks of the disk.

Use DU or other program to change the following bytes of track 1, sector 6.

```
           1c  1d  1e  1f  20  21  22  23  24
ORIGINAL:  01  07  41  55  54  4F  53  54  20
     NEW:  01  0F  20  20  20  20  20  20  20
```

NOTE: Not all systems are the same. If you don't see the word AUTOST when track one sector six is displayed, your system is different and this might not work for you.

You are looking for the word AUTOST. The information in function key zero is stored immediately following the word AUTOST. If you are able to locate the word AUTOST on another track or sector, it might still be possible to follow these instructions at your locations. Regardless, use an old copy disk.

After modifying the system tracks, use SETUP.COM to place the name of the auto-start program in function key zero. Since eight places were set aside for a filename, make sure you use exactly eight places! Fill with spaces after the filename if necessary.

When the computer is reset and the disk booted, the program will run. If you want to disable the auto-start function just set the function key to zero. Once you have changed the system tracks on your disk, these tracks can be transferred to other disks with SYSGEN.COM.

Description of Bytes

(track 1 sector 6 in my system)

`1C` 01 for auto-start,
00 for no auto-start.

To eliminate auto-start entirely, change only this byte. The computer will boot faster and will display a different sign- on message.

`1D` Contains the number of bytes in the command line used to auto-start. In this case seven bytes were required to eliminate the word AUTOST and a trailing space. Eight more were set aside for the new command line for a total of 15 (0F hex). If you would like to use longer command lines, change this byte to suit the length of the command line stored in function key zero. You can also replace AUTOST with a file name. I have a disk on which AUTOST has been replaced with SUBMIT. I set aside 16 additional places for a command line in function key zero. The name of the program I want to submit goes in function key zero where it is easily changed. When booted the disk will always run SUBMIT and whatever is in function key zero.

`1E-23` These locations originally contained the word AUTOST, the name of the program Osborne intended to auto- start the disk.

`24-?` The location of the information stored in function key zero. Varies in length.

Bug or Feature?

When I first tested this, I used XDIR as my auto-start program. I found that XDIR created a file which contained the text of the directory! Every time I booted the disk the file was updated.

* * * * * * *

RUN THE NUMBERS

All About Spreadsheets

SuperCalc2 Ideas and a Question

by Edward Birge

Ron Shaw's ideas for rapid starting of SuperCalc2 (**FOGHORN** June, 1986) may be a bit intimidating for those persons not wanting to reconstruct their programs with DDT.

I have been using a somewhat less elegant method involving the special function keys that speeds up file loading without any modifications.

I call SuperCalc2 either directly during the boot operation or with a special function key. This gives me the message on the screen to *Press* ↵ to begin.

I tried setting up a special function key to input the ↵ plus load the working file, but the load command got lost.

By trial and error I found that if the special function key is set up with three extra spaces, thus:

↵(space)(space)(space)/L FILENAME)

there is enough time for SuperCalc2 to start before receiving the load command.

If you need to be able to do this procedure with more than one filename, I recommend the FK program in the **FOG** library for Osborne 1 computers (**FOG—CPM**.021). That program will allow you to have up to 10 different sets of special function keys.

I have been using SuperCalc2 to maintain grade lists for several years now, and it works extremely well. The arrange command permits me to post a ranked list of grades in the class so that each student can know precisely where he or she stands at all times.

In order to prevent problems with the Family Rights and Privacy Act, grades are posted using only the last five digits of the students' Social Security numbers. If you set up the file at the beginning of the semester so that the student name is in the first column and the abbreviated Social Security number in the second, it is easy to prepare an instructor's printout and a separate student printout.

As a part of the grade list, I have developed a way to automatically do item analysis on the test questions for each exam using a separate program called TESTAVE2.BAS, (submitted for later inclusion in the **FOG** library.

The program takes the contents of each cell, separates the scores for each question, and then averages them. It might interest nonteachers, because it strips off the extra verbiage added by SuperCalc2 when it outputs the contents of a cell and allows you to manipulate the actual numbers that you input.

Now for my question. Can anybody tell me why SuperCalc2, when working with files prepared with SuperCalc, will occasionally reset the system during calculations?

The problem does not always occur and appears most likely to happen when large numbers of calculations are involved. Dale Bates from TOG found that the problem could be prevented by positioning the cursor in cell A1, but didn't know why that made any difference.

* * * * * * *

Lotus 123 to SuperCalc2

by Garth Bennett

I obtained a new Lotus 123 program devised by a guru at my work. The program helped estimate a client's life insurance needs using Lotus. It seemed to me this could be worked on my Executive, but how to get the information to the Exec without all that typing?

Here is how it was accomplished. Firstly remember, we are only transfering the data from Lotus and not the formulas themselves.

- Format an MS-DOS disk in the single sided mode. To do this at the DOS prompt you would type **format B:/"1**.
- Invoke the Lotus 123 Utility disk and choose the Translate option.
- Follow the menu driven program to create a DIF file.
- Go for coffee. My file was 180k and took four minutes to transfer. The resulting file was about 90K. I assume the difference is in the formulas and other stuff not transfered.

Back at the Executive. I used Media Master and copied the <file.dif> to an Osborne Executive formated disk.

On your Super Calc2 disk is a program called SDI which is menu driven and will lead you through the steps necessary to convert a DIF(same as SDF on the menu) to a SuperCalc2 file <file.cal>.

At this point I was able to exit SDI and call up the file in SuperCalc and work on the file by inserting the various formulas required.

Be prepared for another wait at the SDI transfer. In my case with a 90K file it took about six minutes. I don't have a lot of need for this ability but it is good to know it can be done especially if you work with many Lotus data files.

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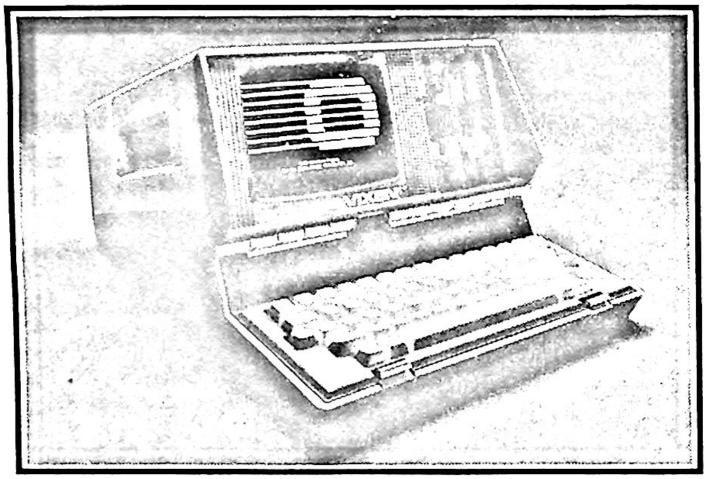

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Staffing a booth at a computer show is both rewarding and exhausting. Standing on cement floors for hours; fielding questions from people with an enormous variety of interests; keeping track of the supplies, merchandise, and equipment; trying to grab a bite to eat and see the show yourself; and talking computers, computers, computers is an experience like few others.

A very special thank you to Jim Holmes and his volunteers from OKOK for staffing a booth at the Commodore show at the Los Angeles Airport Hilton. They made many new friends for **FOG**, and signed up lots of new members.

Helping Jack Brown sign up members and sell modems at the 4th annual Personal Computer Faire were: Kenji Nakedegawa, Don Whittinghill, Pat Watters, Jean Koch, K.C. Jones, Bobbie Freitas, Norma Shosid, Lorin Thompson, and Richard Lesnick. Thank you one and all for a job well done!

Volunteer Staffers

Most of these volunteers came and helped out numerous times last month. Thanks go to Dick Worth, Roger Lugnet, Lou Polk, Irv Sacks, Vernon Tiptin, John A. Meyers, Dick Ezzard, Joe Richards, and Bobbie Freitas. We couldn't get the work done without you!

Donations

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INDEX

An Index to Volume V

by Gale Rhoades

The following is a subject index to all of the articles and letters which were included in Volume V of the **FOGHORN**. Please note that items which are computer specific are usually grouped together under that computer but that many of these contain hints which will apply to all users.

Each reference lists both the issue number and the month, year of release in the format #3(Dec'85) to conserve space. The number which follows is the page reference.

A

- 12-coin puzzle, #3(Dec'85) 43
- Accounting software
  - for CP/M and MS-DOS, #9(Jun'86) 19
  - Desktop Accountant, version 7 reviewed, #4(Jan'86) 33
  - Home Money Manager, #11(Aug'86) 59
  - for your checkbook, #8(May'86) 30
- Advanced dBASE II User's Guide reviewed, #7(Apr'86) 23
- African wildlife pictures, obtaining, #5(Feb'86) 12
- Alternate uses for your programs, #8(May'86) 19
- AMCALL modem, *see* COMM-PAC modem
- An Ecosystem Adventure in SuperCalc, correction, #3(Dec'85) 12
- Anderson Jacobsen 831 printer
  - with Osborne 1, #1(Oct'85) 11
  - with Vixen, #1(Oct'85) 11
- ANYCODE, WordStar print control, #3(Dec'85) 76
- Application Engineering address, #9(Jun'86) 19
- Applied Basic Programming reviewed, #7(Apr'86) 24
- Applied Computer Techniques address, #3(Dec'85) 44
- Apteryx Software address, #5(Feb'86) 40
- Areacodes to geographical area, #6(Mar'86) 34
- Artisoft Inc address, #10(Jul'86) 43
- ASCII, MBasic program to see & use, #9(Jun'86) 53
- ASCII character codes chart, #1(Oct'85) 51
- ASCII characters & non-English languages, #5(Feb'86) 20
- ASCII to dBASE II format, #4(Jan'86) 64
- ASCII to decimal or hex, #1(Oct'85) 51
- Ashton-Tate address, #9(Jun'86) 77
- ASM
  - assembling a file, #12(Sep'86) 50
  - beginners notes, #8(May'86) 65
  - a book to guide you, #9(Jun'86) 14
  - definitions of terms, #12(Sep'86) 49
  - formatting your code, #8(May'86) 65
  - from MBasic, #3(Dec'85) 49
  - how to assemble a file, #5(Feb'86) 46, #7(Apr'86) 12
  - overlays, #12(Sep'86) 50
  - patching, #12(Sep'86) 51
  - printer control, #9(Jun'86) 55
  - proper program structure, #7(Apr'86) 62
  - writing code with WordStar, #7(Apr'86) 12
- ASseMbly language programming, *see* ASM
- Autoloading an I/O Byte, #4(Jan'86) 7

B

- B.C. Software address, #7(Apr'86) 30
- Backups
  - naming the disk, #1(Oct'85) 10
  - suggestion for organization, #10(Jul'86) 13
  - they prevent disaster, #9(Jun'86) 10
  - what happens when you don't, #5(Feb'86) 46
- BASCOM 80-column patches, #4(Jan'86) 43
- **Basic – Second Edition reviewed**, #7(Apr'86) 25
- Basic programming, ideas for beginners, #9(Jun'86) 53
- **Basic Programs for Business – Volume 1 reviewed**, #7(Apr'86) 25
- BDOS ERROR
  - avoiding them, #4(Jan'86) 43
  - eliminating, #2(Nov'85) 5
  - recovery, #3(Dec'85) 4
  - Vixen, #5(Feb'86) 11
  - *see also* Disk problems
- **Beginning and Advanced dBASE II Techniques**, #7(Apr'86) 24
- Bondwell 2 reviewed, #7(Apr'86) 26
- Bondwell Industrial Co Inc address, #7(Apr'86) 28
- Booting on drive B
  - Executive, #1(Oct'85) 10
  - Osborne 1, #2(Nov'85) 11
- Booting problems, a fix, #8(May'86) 15
- Borland address, #10(Jul'86) 41
- Bowling statistics, #1(Oct'85) 13
- BrainStorm (SmartBrain), *see* Outline processor

C

- C
  - Aztec reviewed, #10(Jul'86) 27
  - MIX, #11(Aug'86) 5
  - MIX for CP/M & MS-DOS, #7(Apr'86) 30, #8(May'86) 34
  - programming notes, #6(Mar'86) 58
- Capturing screen dumps to file, #3(Dec'85) 46
- Cataloging disks with SuperCalc, #2(Nov'85) 12
- Cataloging pages of data, *see* Data management
- CBasic, convert programs from books, #9(Jun'86) 53
- CDE address, #8(May'86) 30
- CERTIFY, for modifying disks, #7(Apr'86) 15
- Checks & Balances, #8(May'86) 30
- CI Software address, #11(Aug'86) 29
- Circuit board, fixing it yourself, #4(Jan'86) 13, #8(May'86) 49
- Cobol, Nevada, #8(May'86) 30
- /.COM, #1(Oct'85) 10
  - getting it to work, #5(Feb'86) 12
- \.COM, reboot last program used, #1(Oct'85) 16
- COMM-PAC modem, #1(Oct'85) 56
- Commodore
  - 128 reviewed, #10(Jul'86) 17
  - buying new products, #1(Oct'85) 12
  - cursor control codes, #9(Jun'86) 54
  - FOG Disk Library, #5(Feb'86) 68
- CompuServe, Morrow SIG, #1(Oct'85) 61
- Computer desk, build it yourself, #11(Aug'86) 12
- Computers
  - insurance & service contracts, #10(Jul'86) 16
  - trailing edge of technology, #11(Aug'86) 13
- Computers in the office, #2(Nov'85) 23
- Congenial Software address, #4(Jan'86) 6
- Cooling makes disks last longer, #2(Nov'85) 43
- Correction
  - An Ecosystem Adventure in SuperCalc, #3(Dec'85) 12
  - dBASE II data file structure, #11(Aug'86) 58
  - FILIST, #9(Jun'86) 75
  - Gemini prints elite, #12(Sep'86) 11
  - MBasic, adding pause to programs, #8(May'86) 76
  - NewWord ver 2.16 compared to WordStar, #6(Mar'86) 76
  - reverse video block cursor (80 & 104 column), #1(Oct'85) 4
  - WordStar
    - block movements, #5(Feb'86) 70
    - creating boxes around text, #3(Dec'85) 12
    - interfacing printers, #12(Sep'86) 8
- CP/M
  - comment lines, #5(Feb'86) 15
  - copying disks on one drive system, #12(Sep'86) 10
  - "DIRB?", #5(Feb'86) 15
  - emulation on MS-DOS, #8(May'86) 11

CP/M, continued

  - giving it some MS-DOS commands, #5(Feb'86) 44
  - printing from keyboard or screen, #5(Feb'86) 15
  - a shell, #10(Jul'86) 41
  - what is it, #7(Apr'86) 18
- **CP/M Assembly Language Programming reviewed**, #9(Jun'86) 14
- CPM+
  - creating 0K files, #4(Jan'86) 45
  - cursor position, #9(Jun'86) 73
  - file cataloging, #12(Sep'86) 45
  - multiple commands on one line, #6(Mar'86) 75
  - RSX creation, #11(Aug'86) 42
- CTS modem, *see* COMM-PAC modem

D

- **Data Based Advisor reviewed**, #7(Apr'86) 24
- **Data File Programming in Basic reviewed**, #7(Apr'86) 25
- Data management
  - Electra-Find, #9(Jun'86) 77
  - FILEBASE, #8(May'86) 31, #8(May'86) 32
  - FindMaster, #7(Apr'86) 32
  - FREEFILER, #9(Jun'86) 12
  - FYI 3000, #7(Apr'86) 29
  - PdbM, #7(Apr'86) 30
  - Perfect Filer, #7(Apr'86) 52
  - REFERENCE, #9(Jun'86) 32
  - Search, #9(Jun'86) 76
  - SmartBrain, #7(Apr'86) 37
  - some ideas, #8(May'86) 19
  - Superfile, #7(Apr'86) 29
  - *see also* dBASE II
- dBASE II
  - Assembly language calls, #11(Aug'86) 57
  - batch processing, #12(Sep'86) 30
  - calendar dating system, #5(Feb'86) 60
  - calling .COM files, #4(Jan'86) 61
  - changing defaults in ver. 2.3b & 2.41, #1(Oct'85) 41
  - changing field names, #9(Jun'86) 48
  - checking quote pairs in WordStar, #2(Nov'85) 6
  - CHR() function, #1(Oct'85) 50, #3(Dec'85) 67, #7(Apr'86) 55
  - command file problems, #7(Apr'86) 58
  - condensed print with Epson printers, #3(Dec'85) 69
  - converting 2.3b .MEM files to 2.43*, #4(Jan'86) 59
  - creating startup menu, #2(Nov'85) 51
  - customize your REPORTs, #3(Dec'85) 67
  - data file structure, #7(Apr'86) 58
    - corrected, #11(Aug'86) 58
  - datafile conversion, #4(Jan'86) 64
  - DATE()
    - error trapping, #5(Feb'86) 60
    - manipulation, #7(Apr'86) 53
    - retained during QUIT TO, #1(Oct'85) 41
    - set from .MEM file, #1(Oct'85) 42
    - and substring function, #6(Mar'86) 13
    - translated, #7(Apr'86) 62
  - dates you can index on, #6(Mar'86) 17
  - finding character string, #11(Aug'86) 57
  - from Perfect Calc, #8(May'86) 59
  - getting started, #2(Nov'85) 51, #9(Jun'86) 52
  - graphics display on Osborne 1, #1(Oct'85) 50
  - helpful books, #7(Apr'86) 23
  - indexing help, #6(Mar'86) 57
  - KayPro real time clock, #7(Apr'86 54
  - Kaypro video attributes, #8(May'86) 64
  - locating part of a field, #7(Apr'86) 52
  - menu creation, #11(Aug'86) 58
  - never hit RESET button, #4(Jan'86) 63
  - printing, #7(Apr'86) 55
  - printing control codes, #3(Dec'85) 69
  - problems with printing, #3(Dec'85) 4
  - sorting, #6(Mar'86) 57
  - splitting a field into two parts, #3(Dec'85) 71
  - substrings, #3(Dec'85) 71, #7(Apr'86) 52
  - temporary files regain disk space, #2(Nov'85) 6
  - three programs for dates, #12(Sep'86) 29
  - "too many files open", #9(Jun'86) 6
  - for typesetting, #8(May'86) 63
  - upgrading to ver. 2.43*, #7(Apr'86) 53
  - ver 2.43 made faster, #6(Mar'86) 35

- dBASE II User's Guide reviewed, #7(Apr'86) 23
- dBASE III, converting to Lotus 1-2-3, #9(Jun'86)7
- DDT
  - a look through your operating system, #7(Apr'86) 18
  - M instruction, #7(Apr'86) 13
- DEC Rainbow adds 16-bit to Osborne 1, #6(Mar'86) 72
- DEC Rainbow model B, #9(Jun'86) 15
- Decimal to ASCII or hex, #1(Oct'85) 51
- Definitions of computer terms, #12(Sep'86) 49
- Digest of Educational Software address, #2(Nov'85) 70
- Digital Marketing address, #7(Apr'86) 6, #11(Aug'86) 29
- Disco-Tech address, #6(Mar'86) 73
- Disks
  - avoiding problems, #8(May'86) 35
  - eliminating BDOS errors, #2(Nov'85) 5
  - flippies not always good, #9(Jun'86) 13
  - guide to allocation groups, #3(Dec'85) 44
  - handling tips, #2(Nov'85) 43
  - labelling
    - conventions, #4(Jan'86) 11
    - creating 0K files, #9(Jun'86) 56
    - creating 0K files under CPM+, #4(Jan'86) 45
    - matching hardcopy, #4(Jan'86) 50
    - tips, #2(Nov'85) 5
  - modify
    - with CERTIFY, #7(Apr'86) 15
    - *see also* DU
  - organizing for faster operation, #4(Jan'86) 14
  - permissable temperature variation, #4(Jan'86) 9
  - printing the directory, #6(Mar'86) 20
  - questions answered, #10(Jul'86) 12
  - recovering with DU, #2(Nov'85) 41, #5(Feb'86) 46, #7(Apr'86) 44, #8(May'86) 35, #9(Jun'86) 26
  - recovering from BDOS ERROR, #3(Dec'85) 4
  - recovering from "DISK FULL", #5(Feb'86) 54
  - store a spare copy of your disk directory, #4(Jan'86) 50
  - X-ray damage, #4(Jan'86) 49
- Documate, #3(Dec'85) 57
- Documentation
  - standards, #1(Oct'85) 9, #3(Dec'85) 10
  - ways & means, #10(Jul'86) 14
- Dresselhaus Computer Products address, #9(Jun'86) 17
- Drive problems
  - adjusting speed, #5(Feb'86) 10
  - a cheap fan, #3(Dec'85) 8
  - cooling can reduce them, #2(Nov'85) 43
  - fix for oxidation, #3(Dec'85) 7
  - fix suggestions, #8(May'86) 10
  - fixing a "lazy drive B", #2(Nov'85) 5
  - fixing Osborne 1 drive A, #2(Nov'85) 11
  - overstepping, #7(Apr'86) 77
  - reducing on Osborne 1, #6(Mar'86) 75
- DriveC:, *see* RAM Disk
- DU
  - another rescue, #10(Jul'86) 15
  - for autoloading an I/O Byte, #4(Jan'86) 7
  - changing any byte on the disk, #3(Dec'85) 61
  - how to use ver. 8.6, #2(Nov'85) 41
  - patching a program, #6(Mar'86) 34
  - recovering from BDOS ERROR, #3(Dec'85) 4
  - a reference guide, #3(Dec'85) 28
  - SuperCalc guide to allocation groups, #3(Dec'85) 44
  - unerasing a file, #2(Nov'85) 41
- Dynacomp address, #9(Jun'86) 34

E

- Ecosoft, Inc. address, #1(Oct'85) 22
- EDFILE, patching programs, #6(Mar'86) 35
- Educational Software, a guide, #2(Nov'85) 70
- Electra-Find, #9(Jun'86) 77
- ENHANCER (Sudden Products), #1(Oct'85) 8
- Epson Geneva (PX-8)
  - file transfers to Executive, #10(Jul'86) 4
  - file transfers to Osborne 1, #2(Nov'85) 11, 40
  - WordStar loaded, #9(Jun'86) 72
- Epson HX-20
  - file transfers to Executive, #5(Feb'86) 6
  - file transfers to Osborne 1, #11(Aug'86) 44
- ERAsing .BAK files, #8(May'86) 18
- Everyman's Database Primer reviewed, #7(Apr'86) 23
- Evolution of computers, #1(Oct'85) 6
- EWDP Software address, #11(Aug'86) 29
- Executive
  - 1.21 ROM, #4(Jan'86) 23
  - backups with one drive, #8(May'86) 73
  - booting on Drive B, #1(Oct'85) 10, 13
  - Centronics pinouts, #9(Jun'86) 66
  - collection of hints, #5(Feb'86) 68
  - connected to Brother HR-15, #7(Apr'86) 6
  - creating new EXECST.COM files, #5(Feb'86) 43
  - creating new fonts with CHARGEN, #7(Apr'86) 6
  - drive upgrade, #2(Nov'85) 16
  - dumb terminal added, #6(Mar'86) 71
  - EXECST
    - creating new ones, #5(Feb'86) 43
    - improvement for, #6(Mar'86) 75
    - replace with PROFILE.SUB, #7(Apr'86) 21
    - replaced, #8(May'86) 73
  - extended storage capacity, #4(Jan'86) 9
  - file cataloging, #12(Sep'86) 45
  - file transfers
    - to Epson Geneva (PX-8), #10(Jul'86) 4
    - to Epson HX-20, #5(Feb'86) 6
    - to NEC 8201A, #7(Apr'86) 74
    - to NEC 8401A Starlet, #5(Feb'86) 29
  - French & Polish characters, #7(Apr'86) 6
  - G2 drive upgrade, #3(Dec'85) 57
  - graphics software, #4(Jan'86) 27
  - INOVA 500 & WordStar, #7(Apr'86) 75
  - INOVA 500 installed, #4(Jan'86) 23
  - monitor fix, #4(Jan'86) 69, #5(Feb'86) 68, #6(Mar'86) 69
  - multiple commands on one line, #6(Mar'86) 75
  - on-screen underlining, #9(Jun'86) 75
  - patch for KEYS.COM, #4(Jan'86) 69
  - power supply schematics & parts list, #2(Nov'85) 61
  - RAM disk, #4(Jan'86) 9
  - reverse video, #9(Jun'86) 75
  - ROM fix, #7(Apr'86) 31
  - screen dump utility, #7(Apr'86) 73
  - SID replaces SAVE, #4(Jan'86) 11
  - SmartKey II+ quirks, #4(Jan'86) 70
  - Special Function Keys, #3(Dec'85) 57
  - storage capacity upgrades, #4(Jan'86) 12
  - SUBMIT file problems, #12(Sep'86) 37
  - Televideo PT as dumb terminal, #3(Dec'85) 55
  - as a typewriter, #7(Apr'86) 6
  - upgrade to 1/2 Megabyte, #3(Dec'85) 24
  - use SETDEF.COM to run a program, #2(Nov'85) 60
  - WordStar print control with ANYCODE, #3(Dec'85) 76
  - writing screen to file, #3(Dec'85) 46
- Exploring the World of the Personal Computer, #7(Apr'86) 23
- Eyeware for computer users, #2(Nov'85) 10, #7(Apr'86) 7

F

- Fans, #3(Dec'85) 8, #5(Feb'86) 8, #7(Apr'86) 65, #7(Apr'86) 77
  - eliminating BDOS ERRORS, #8(May'86) 13
  - they reduce drive problems, #2(Nov'85) 43
- File transfers, *see* transferring files
- Filenames
  - conventions, #4(Jan'86) 11
  - suggestions, #7(Apr'86) 10
- Files
  - cleaning up the directory, #10(Jul'86) 5
  - combining them, #8(May'86) 19
  - modify, *see also* DU; EDFILE; SUPERZAP
  - protect them with NewSWeeP, #9(Jun'86) 9
- FILIST.BAS
  - print WordStar files to screen, #1(Oct'85) 39
    - correction, #9(Jun'86) 75
- FindMaster, #7(Apr'86) 32
- FK.COM
  - Osborne 1 Special Function Keys, #5(Feb'86) 63
  - Special Function Keys with WordStar, #5(Feb'86) 15
- FLASHPRINT!!, boxes and frames, #5(Feb'86) 49

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FOG
  1985 financial reports, #9(Jun'86) 4
  answers to frequently asked questions, #12(Sep'86) 5
  dues raised, #8(May'86) 6
  a guide to services, #8(May'86) 7
  helping yourself, #5(Feb'86) 20
  how it can work for you, #2(Nov'85) 15
  how to help, #10(Jul'86) 3
  how to make it work for you, #1(Oct'85) 7
  how to vote, #4(Jan'86) 3
  its purpose & goals, #4(Jan'86) 5
  office hours, #12(Sep'86) 6
FOGHORN
  back issues clarify current articles, #1(Oct'85) 13
  how to submit articles, #4(Jan'86) 4
  index to Volume IV, #2(Nov'85) 62
  submissions, #6(Mar'86) 5
  writer's guidelines, #6(Mar'86) 4
FOGLIGHT
  how to submit articles, #4(Jan'86) 4
  Introduction of, #1(Oct'85) insert
FOOTNOTE upgrade, #7(Apr'86) 6
Footnotes
  programs reviewed & compared, #5(Feb'86) 33
  responses to review, #8(May'86) 12
Force 2 Ltd address, #7(Apr'86) 6
FORTRAN, a plotting routine, #3(Dec'85) 10
Fox & Geller address, #9(Jun'86) 77
FRONT, a menu for CP/M, #8(May'86) 29
Future Systems' Executive upgrade, #2(Nov'85) 16

G

G2 Systems
  address, #3(Dec'85) 74
  drive upgrade for Osborne 1, #3(Dec'85) 74
Gaining disk space
  with dBASE II, #2(Nov'85) 6
  with SuperCalc, #2(Nov'85) 7
  with WordStar, #2(Nov'85) 7
Getting the Most from WordStar and MailMerge, #11(Aug'86) 26
Grade records kept with SuperCalc, #2(Nov'85) 47
Grammatik upgrade, #7(Apr'86) 6
Graphics
  on Osborne 1 with dBASE II, #1(Oct'85) 50
  on Osborne 1 with MBasic, #4(Jan'86) 13
Graphics software
  Electric Easel, #11(Aug'86) 24
  Rembrandt, #4(Jan'86) 34
Graphs, SUBMIT connects SuperCalc & Rembrandt, #5(Feb'86) 43

H

Handicapped users, *see* key redefinition
Hard disks
  backing up your files, #4(Jan'86) 24
  crash recovery on a Trantor, #7(Apr'86) 72
  software placement, #4(Jan'86) 25
    user areas, #7(Apr'86) 15
  WestWind, #3(Dec'85) 56
Hex to decimal or ASCII, #1(Oct'85) 51
"High-order" bit, eliminating from WordStar, #1(Oct'85) 39
Home budgeting, #8(May'86) 30

I

I/O Byte, autoloading, #4(Jan'86) 7
IBM disks, reading them on Osborne 1, #5(Feb'86) 11
Improving Your Writing with Word Processing, #4(Jan'86) 20
INOVA, *see* RAM Disk
Inovatronics address, #10(Jul'86) 62
Introducing dBASEII reviewed, #1(Oct'85) 18

J

J&J Electronics address, #7(Apr'86) 77

K

KAMAS, *see* Outline processor
Kaypro 2000 reviewed, #6(Mar'86) 29
Kaypro
  arrow keys redefined, #7(Apr'86) 69
  graphics package, #9(Jun'86) 68
  graphics software, #4(Jan'86) 27
  Master Menu personalized, #9(Jun'86) 67
  modem port, #1(Oct'85) 59
  monitor ROM, #1(Oct'85) 60
  networking on a budget, #7(Apr'86) 68
  number keys redefined, #7(Apr'86) 70
  operating system enhancements, #4(Jan'86) 70
  pinouts for modem port, #1(Oct'85) 60
  Plu*Perfect, #4(Jan'86) 70
  resetting arrow keys after WordStar, #10(Jul'86) 7
  screen control, #1(Oct'85) 58
  Special Function Keys for WordStar, #5(Feb'86) 7
  speeding up, #1(Oct'85) 60
  video attributes with dBASE II, #8(May'86) 64
Key redefinition
  aid for handicapped users, #5(Feb'86) 20
  MAKEKEY, #3(Dec'85) 57
  ManyKey, where to order, #4(Jan'86) 21
  SmartKey, #7(Apr'86) 35
    on Executive, #4(Jan'86) 70
    saves time, #5(Feb'86) 42
    tutorial
      part 1, #7(Apr'86) 35
      part 2, #8(May'86) 28
      part 3, #9(Jun'86) 21
      part 4, #10(Jul'86) 24
  XtraKey, #5(Feb'86) 20, #5(Feb'86) 42
KEYS.COM patch for Executive, #4(Jan'86) 69

L

Laptop computer, #7(Apr'86) 26
Large spreadsheets, SuperCalc, #1(Oct'85) 10
"Lazy Drive B", a fix, #2(Nov'85) 5
LBR files
  including .LBR files, #4(Jan'86) 7
  using them, #9(Jun'86) 60
Lexis/Nexis on Osborne 1, #1(Oct'85) 65
Library
  conversion nearly complete, #10(Jul'86) 56
  FOG/CPM.001 – .008, #2(Nov'85) 54
  FOG/CPM.009 – .012, #3(Dec'85) 65
  FOG/CPM.013 – .020, #4(Jan'86) 67
  FOG/CPM.021 – .025, #5(Feb'86) 61
  FOG/CPM.026 – .031, #6(Mar'86) 65
  FOG/CPM.032 – .033, #7(Apr'86) 63
  FOG/CPM.034, .038 – .041, #8(May'86) 68
  FOG/CPM.035, .042 – .046, #9(Jun'86) 58
  FOG/CPM.047 – .057, #10(Jul'86) 59
  FOG/CPM.036, .067 – .079, #11(Aug'86) 52
  FOG/CPM.037, .058 – .066, .079, .084, #12(Sep'86) 56
  reorganization scheme, #1(Oct'85) 46
  submissions, #1(Oct'85) 46
  updates, FOG/CPM.096 – .097, #12(Sep'86) 56
  why no .LBR files, #7(Apr'86) 8
Library files, *see* LBR files
Lotus 1-2-3
  compared to SuperCalc, #3(Dec'85) 44, #9(Jun'86) 6
  reading dBASE III files, #9(Jun'86) 7
LSWEEP, a guide, #9(Jun'86) 60
LU, a guide, #9(Jun'86) 60

M

MAC-80, no problem with $ in .SUB files, #5(Feb'86) 11
Magic Wand, #10(Jul'86) 9

MailMerge
  Conditional Print statements, #7(Apr'86) 38
  key to faster letters, #4(Jan'86) 54
  personalizing letters, #7(Apr'86) 49
  reformatting paragraphs, #7(Apr'86) 48
  selective printing, #10(Jul'86) 50
  skipping blank fields, #7(Apr'86) 50
  tracking your programs, #10(Jul'86) 48
  using .SV rather than .AV in some instances, #2(Nov'85) 10
  wrapping lines, #7(Apr'86) 48
  see also WordStar
Manx Software address, #10(Jul'86) 41
Mastering dBASE II the Easy Way reviewed, #7(Apr'86) 24
Math* upgrade, #7(Apr'86) 6
Mathematical functions
  trig and other functions, #5(Feb'86) 66
  use SuperCalc, #8(May'86) 59
MBasic
  12-coin puzzle, #3(Dec'85) 38
  80-column patches for BASCOM, #4(Jan'86) 43
  adding pause to programs, #5(Feb'86) 13
    correction, #8(May'86) 76
  automatic line numbering, #7(Apr'86) 60
  charting stock performance, #6(Mar'86) 24
  compiling your code with MTBASIC, #4(Jan'86) 29
  creating disk labels (0K files), #9(Jun'86) 56
  creating a menu from directory listing, #3(Dec'85) 63
  data entry, #12(Sep'86) 52
  directory listing created MENU program, #5(Feb'86) 12
  display screen message, #7(Apr'86) 58
  editing your code, #6(Mar'86) 64
  "garbage" collection, #5(Feb'86) 50
  getting started, #8(May'86) 67
  graphics on Osborne 1, #4(Jan'86) 13
  helpful books reviewed, #7(Apr'86) 24
  machine language subroutines, #6(Mar'86) 27
  menu program, #3(Dec'85) 63, #3(Dec'85) 60
  NEWFACE defines printer control, #7(Apr'86) 21
  numbering lines, #1(Oct'85) 39
  organizing a disk, #3(Dec'85) 60
  Osborne 1 on-screen underlining, #9(Jun'86) 53
  preprocessing, #7(Apr'86) 60
  print proportional text, #5(Feb'86) 49
  print WordStar to screen, #1(Oct'85) 39
    correction, #9(Jun'86) 75
  printing on Osborne 1, #6(Mar'86) 73
  RENUM command, #8(May'86) 66
  reveal ASCII characters, #9(Jun'86) 53
  routine for blinking text, #6(Mar'86) 64
  routine to toggle printer on Morrow, #6(Mar'86) 16
  routine for user input of filenames, #3(Dec'85) 52
  sorting routine, #6(Mar'86) 59, 60 61
  Special Function Keys, #3(Dec'85) 60
  store a spare copy of your disk directory, #4(Jan'86) 50
  THE MBASIC HANDBOOK reviewed, #3(Dec'85) 20
  translating to assembly language, #3(Dec'85) 49
  writing code for use with word processors, #6(Mar'86) 22
Media conversion, #8(May'86) 77
Media Master
  on MS-DOS, formats & emulation, #10(Jul'86) 8
  patch for Nuevo DSDD upgrade, #2(Nov'85) 58, #7(Apr'86) 38
MEDSTAT reviewed, #4(Jan'86) 28
Metasoft Ky address, #7(Apr'86) 32
MEX114 reviewed, #4(Jan'86) 30
Microsoft Basic – Second Edition reviewed, #7(Apr'86) 25
MicroSoft Basic and Its Files reviewed, #7(Apr'86) 24
Microstat reviewed, #1(Oct'85) 22
MITE & MYTERM with CPM+, #12(Sep'86) 24
MIX C, #7(Apr'86) 30, #8(May'86) 34
MIX Software address, #7(Apr'86) 31
Modem
  connecting to Osborne 1, #3(Dec'85) 76
  MEX software, #4(Jan'86) 30
Modem port
  pinouts for Kaypro, #1(Oct'85) 60
  programming on Kaypro, #1(Oct'85) 59
Montezuma Micro address, #9(Jun'86) 72
Morrow, MBasic printer toggle routine, #6(Mar'86) 16
Morrow Owners Review, #1(Oct'85) 61
Morrow SIG on CompuServe, #1(Oct'85) 61
Mortgage amortization table, SuperCalc, #10(Jul'86) 57
MOVCPM, largest possible with Osborne 1, #7(Apr'86) 13
MS-DOS
  CP/M can do some of the tricks, #5(Feb'86) 44
  on CP/M computers, #5(Feb'86) 24
  CP/M emulation, #8(May'86) 11
MTBasic, #4(Jan'86) 29, #7(Apr'86) 32, 67
  reviewed, #10(Jul'86) 27
Multi-tasking, MTBasic, #7(Apr'86) 32
Multiplan, expanding for 80-column, #6(Mar'86) 14
MYTERM modem, *see* COMM-PAC modem

N

NEC 8201A (Starlet)
  file transfers
    to Executive, #7(Apr'86) 74
    to Osborne 1, #1(Oct'85) 32
NEC 8401A (Starlet)
  file transfers
    to Executive, #5(Feb'86) 29
    to Osborne 1, #5(Feb'86) 29
  reviewed, #5(Feb'86) 28
Networking, WestWind Web, #3(Dec'85) 56, #11(Aug'86) 18
Nevada Cobol, #8(May'86) 30
NewStar Software address, #4(Jan'86) 11
NewSWeeP
  deleting .BAK files, #3(Dec'85) 16
  a discussion with Dave Rand, #8(May'86) 22
  soft hyphens fixed, #5(Feb'86) 20
  some tips, #9(Jun'86) 9
NewWord
  compared to WordStar, #4(Jan'86) 35
    correction, #6(Mar'86) 76
  destructive backspace, #11(Aug'86) 5
  neat features, #4(Jan'86) 10
  problems, #1(Oct'85) 10
  upgrade to ver. #1(Oct'85) 12, 2
Nickelodeon Software address, #11(Aug'86) 59
NorthWest Analytical Inc address, #1(Oct'85) 27
Novices
  copy instead of formatting, #8(May'86) 18
  curiosity brings knowledge, #5(Feb'86) 20
  dBASE II for beginners, #9(Jun'86) 52
  getting started with MBasic, #8(May'86) 67
  getting started with WordStar, #9(Jun'86) 29
  a helping hand, #7(Apr'86) 17
  intro to ASseMbly language programming, #8(May'86) 65
  marking keys, #8(May'86) 23
  MENU.BAS makes MBasic easier, #3(Dec'85) 63
  a menu for CP/M, #8(May'86) 29
  modifying WordStar for beginners, #3(Dec'85) 77
  rereading helps, #5(Feb'86) 21
  review of helpful books, #7(Apr'86) 23
  some suggestions, #7(Apr'86) 20
  trick for learning more, #6(Mar'86) 11
NSWEEP, *see* NewSWeeP
NSWP, *see* NewSWeeP
Nuevo
  80-column upgrade, #2(Nov'85) 5
  80-column upgrade & DSDD drives, #5(Feb'86) 11
  Double Density upgrade, #1(Oct'85) 11
  fine support for disk upgrade, #5(Feb'86) 8
  quad density for Osbornes, #11(Aug'86) 14
Nuevo DSDD upgrade, patch for Media Master, #2(Nov'85) 58, #7(Apr'86) 38
NWA address, #1(Oct'85) 27

O

- Oasis Systems address, #4(Jan'86) 21, #11(Aug'86) 29
- Okidata Corp address, #9(Jun'86) 65
- O'Neill Software address, #9(Jun'86) 77
- Operating system, *see* CP/M; CPM+; MS-DOS
- Osborne 1
  - adding more drives, #10(Jul'86) 5
  - adjusting drive speed, #4(Jan'86) 43
  - with Anderson Jacobsen 831 printer, #1(Oct'85) 11
  - auto starting with SUBMIT, #5(Feb'86) 44
  - automatic program loading, #12(Sep'86) 38
  - blinking cursor
    - on 80-column, #6(Mar'86) 16
    - with Nuevo Double Density, #7(Apr'86) 66
    - with WordStar, #2(Nov'85) 40
  - booting on Drive B, #2(Nov'85) 11, #7(Apr'86) 63
  - the break signal, #6(Mar'86) 25
  - centronics to Panasonic KX-P1091 printer, #2(Nov'85) 15
  - changing disk drives, #2(Nov'85) 11
  - connecting a modem, #3(Dec'85) 76
  - connecting to Olympia RO printer, #6(Mar'86) 15
  - cooling fan, #7(Apr'86) 77
  - correct screen display, #5(Feb'86) 49
  - correction to tech manual, #7(Apr'86) 65
  - cursor control, #5(Feb'86) 65
  - delete key, #5(Feb'86) 28
  - drive overstepping, #7(Apr'86) 77
  - drive upgrade from G2, #3(Dec'85) 74
  - EPROM character set, #7(Apr'86) 65
  - fan added, #7(Apr'86) 65
  - graphics a better way, #4(Jan'86) 13
  - graphics software, #4(Jan'86) 27
  - heat solution, #6(Mar'86) 69
  - with Hewlett Packard ThinkJet, #2(Nov'85) 12
  - hidden keys, #5(Feb'86) 63
  - improving drive reliabiltiy, #6(Mar'86) 75
  - keyboard port, #8(May'86) 10
  - keyboard tip, #12(Sep'86) 47
  - maintenance, #6(Mar'86) 68
  - MBasic printing, #6(Mar'86) 73
  - memory-mapped video for WordStar, #5(Feb'86) 51
  - monitor fix, #5(Feb'86) 55, #7(Apr'86) 67, #8(May'86) 75
  - MTBasic makes in a typewriter, #7(Apr'86) 67
  - with NEC 360 printer, #8(May'86) 74
  - with Olivetti Ink-Jet, #5(Feb'86) 57
  - on-screen underlining, #9(Jun'86) 53
  - reading IBM disks, #5(Feb'86) 11
  - reading Osmosis disks on normal Double Density, #1(Oct'85) 54
  - screen graphics, #9(Jun'86) 70
  - settings for Brother EP44, #5(Feb'86) 14
  - size of CP/M enviorment, #5(Feb'86) 5
  - SUBMIT to auto start, #5(Feb'86) 44
  - transferring files
    - to Epson Geneva (PX-8), #2(Nov'85) 11, 40
    - to Epson HX-20, #11(Aug'86) 44
    - to NEC 8201A, #1(Oct'85) 32
    - to NEC 8401A Starlet, #5(Feb'86) 29
    - to TRS-80 model 100, #3(Dec'85) 48, #6(Mar'86) 74, #11(Aug'86) 42, #12(Sep'86) 40
  - true hardware reset, #3(Dec'85) 74
  - use for firmware development, #3(Dec'85) 49
  - using KAMAS, #4(Jan'86) 27
  - video attributes for TOUR, #11(Aug'86) 38
  - WordStar 3.3 patches for TI/855 printer, #1(Oct'85) 8
- Osborne 4, *see* Vixen
- Osborne
  - arrow keys for WordStar, #4(Jan'86) 45
  - arrow keys wrong, #8(May'86) 10
  - AUTOST
    - and DriveC:, #7(Apr'86) 5
    - a new way, #5(Feb'86) 44
    - substituting another program, #4(Jan'86) 10
    - on the Vixen, #1(Oct'85) 31, #12(Sep'86) 8
  - drive problems, #8(May'86) 10
- Osborne (continued)
  - fix for booting problems, #8(May'86) 15
  - fixing your circuit board, #4(Jan'86) 13
  - grounding strips, #12(Sep'86) 46
  - monitor disconnected, #5(Feb'86) 49
  - Nuevo adds quad density, #11(Aug'86) 14
  - printer initialization, #6(Mar'86) 8
  - protection from keyboard catch, #1(Oct'85) 13
  - repairing circuit boards, #8(May'86) 49
  - resetting after disk change system parameters, #2(Nov'85) 6
  - SETUP
    - changing with Special Function Keys, #2(Nov'85) 6
    - printer initialization, #6(Mar'86) 8
- Osmosis 80-column
  - with 800K drive problems, #5(Feb'86) 10
  - memory mapped video, #10(Jul'86) 5
  - SuperCalc, #12(Sep'86) 28
- Osmosis disks on normal Double Density Osborne 1, #1(Oct'85) 54
- OUTLINE.COM, note taking with WordStar, #5(Feb'86) 15
- Outline processor
  - KAMAS, #4(Jan'86) 27, #7(Apr'86) 34
    - with WordStar, #4(Jan'86) 27, 52
  - OUT-THINK, #8(May'86) 77
  - OUT-THINK & KAMAS, #11(Aug'86) 22
  - OUT-THINK reviewed, #12(Sep'86) 13
  - SmartBrain, #7(Apr'86) 36
  - Thoughtline, #10(Jul'86) 4, #11(Aug'86) 5, #11(Aug'86) 22
  - TOUR20, #8(May'86) 16
  - TOUR on the Osborne 1, #11(Aug'86) 38
  - TOUR printing, #11(Aug'86) 51
- Oxidation on connections, a fix, #3(Dec'85) 7
- OZROM 1E, conflict resolved, #6(Mar'86) 14

P

- Pacific Foundation address, #8(May'86) 33
- Padding text lines to fixed length with WordStar, #1(Oct'85) 38
- Patches, what are they, #6(Mar'86) 20
- Patching, how to, #12(Sep'86) 51
- Patching programs, *see* DU; EDFILE; SUPERZAP
- Patchman, switchbox, #3(Dec'85) 10
- PC-8200 User Monthly address, #1(Oct'85) 38
- PCFile
  - better than DataStar, #10(Jul'86) 43
  - Standardization in Cooperative Databases, #1(Oct'85) 10, #3(Dec'85) 9
- Pearlsoft address, #4(Jan'86) 70
- Perfect Calc, converted to dBASE II, #8(May'86) 59
- Perfect Filer, printing labels, #7(Apr'86) 52
- Perfect Writer
  - format error messages, #11(Aug'86) 30
  - pagination of long documents, #11(Aug'86) 30
  - printing long pages, #11(Aug'86) 30
  - repeat command with numbers, #8(May'86) 57
  - template substitutes, #11(Aug'86) 29
- Personal Pearl
  - don't use PIP archive option, #4(Jan'86) 70
  - on a hard disk, #4(Jan'86) 25
  - networked on Executive, #3(Dec'85) 56
  - screen control codes, #4(Jan'86) 16
  - transferring data to WordStar, #2(Nov'85) 45
  - on the Vixen, #4(Jan'86) 16
- PIP
  - big files split, #9(Jun'86) 10
  - cleaning up WordStar document files, #1(Oct'85) 39
  - how it works, #7(Apr'86) 19
  - merging files, #9(Jun'86) 10
  - numbering MBasic programs, #1(Oct'85) 39, #7(Apr'86) 61
  - printing disk directory, #6(Mar'86) 20
  - what is it, #8(May'86) 19
- Plu*Perfect Systems address, #4(Jan'86) 71
- Power surges cause problems, #7(Apr'86) 14
- Practical jokes with computers, #8(May'86) 20
- Print buffer
  - on any budget, #5(Feb'86) 31
  - a must for big print jobs, #5(Feb'86) 11

- Print to screen including bold & underling, #1(Oct'85) 39
- Printer control, MBasic NEWFACE, #7(Apr'86) 21
- Printer stand, building from old refrigerator, #1(Oct'85) 13
- Printers
  - Anderson Jacobsen 831
    - to Osborne 1, #1(Oct'85) 11
    - to Vixen, #1(Oct'85) 11
  - Brother Correctronic 50 Typewriter reviewed, #2(Nov'85) 26
  - Brother EP44, #5(Feb'86) 14
  - Brother HR-15 & Executive, #7(Apr'86) 6
  - Brother to Vixen, #6(Mar'86) 15
  - C.Itoh 8510 & WordStar, #3(Dec'85) 46
  - controlling it with Assembly Language, #9(Jun'86) 55
  - Dynax DX-15 reviewed, #10(Jul'86) 19
  - Epson FX upgrades, #11(Aug'86) 19
  - Epson HS-80 LetterJet, #8(May'86) 24
  - Epson maintenance, #11(Aug'86) 47
  - Epson MX & FX with dBASE II, #3(Dec'85) 67
  - Epson MX-80 patched for WordStar, #3(Dec'85) 54
  - Epson NLQ upgrade, #12(Sep'86) 41
  - FingerPrint makes Epson letter quality, #9(Jun'86) 17
  - "garbage" characters gone, #11(Aug'86) 8
  - Gemini 10X installed for WordStar, #11(Aug'86) 48
  - Gemini prints elite, #10(Jul'86) 4
    - correction, #12(Sep'86) 11
  - Hewlett Packard ThinkJet with Osborne 1, #2(Nov'85) 12
  - IDS Prism for proportional printing, #5(Feb'86) 14
  - inexpensive stand, #11(Aug'86) 42
  - inexpensive switchbox, #3(Dec'85) 10
  - initialization via Osborne SETUP, #6(Mar'86) 8
  - Juki 6100, #3(Dec'85) 10
  - Juki 2200 reviewed, #6(Mar'86) 28
  - Mannesman Tally, #3(Dec'85) 9
  - Mannesman Tally Spirit, #3(Dec'85) 47
  - missing decenders, #11(Aug'86) 7
  - NEC 360, #8(May'86) 74
  - Okidata 82A to Vixen, #6(Mar'86) 15
  - Okidata ML92, #9(Jun'86) 65
  - Olivetti Ink-Jet PR2300, #2(Nov'85) 10, #5(Feb'86) 57
  - Olympia RO daisywheel, #6(Mar'86) 15
  - Olympic Compact RO, #8(May'86) 13
  - Panasonic KX-P1091 to Osborne 1 centronics, #2(Nov'85) 15
  - removing WD-40 goo, #8(May'86) 50
  - Riteman with Zorba, #9(Jun'86) 63
  - sending control codes from keyboard, #6(Mar'86) 24
  - shipping them, #8(May'86) 18
  - TI/855 to Osborne 1 with WordStar ver.3.3, #1(Oct'85) 8
  - Toshiba 1340 reviewed, #6(Mar'86) 28
- Printing
  - CP/M from keyboard or screen, #5(Feb'86) 15
  - with extras, #8(May'86) 19
- Printing sideways, #3(Dec'85) 47
- Pro/Tem Software address, #5(Feb'86) 39
- Programming, MailMerge tracks your work, #10(Jul'86) 48
- Programming languages, what are they, #6(Mar'86) 21
- Project management with SuperCalc, #2(Nov'85) 47, #7(Apr'86) 51, #9(Jun'86) 36
- Proofreader, a great spelling checker, #4(Jan'86) 6
- Protection from Osborne keyboard catch, #1(Oct'85) 13
- PRTSCRN, for CP/M, #7(Apr'86) 73
- PUNT, #4(Jan'86) 72, #8(May'86) 33
- Puzzle, MBasic program, #3(Dec'85) 43

Q

- QUE order number, #4(Jan'86) 20

R

- RAM disk
  - DriveC:
    - backup to floppy, #11(Aug'86) 5
    - compared to SWP CO-Power 88, #5(Feb'86) 24
    - reviewed, #8(May'86) 24
    - SuperSize SuperCalc, #1(Oct'85) 11
- RAM disk (continued)
  - INOVA 500
    - installed, #4(Jan'86) 22
    - with network, #3(Dec'85) 56
    - reviewed, #2(Nov'85) 26
    - with WordStar on Executive, #7(Apr'86) 75
  - Rowe upgrade for Executive, #3(Dec'85) 24
  - SWP CO-Power 88, #1(Oct'85) 11
    - compared to DriveC:, #5(Feb'86) 24
    - for Morrow MD3, #5(Feb'86) 12
    - for Osborne 1, #3(Dec'85) 74
- RBBS, *see* Remote Systems
- RCA, Telex rules change, #3(Dec'85) 12
- RCP/M, *see* Remote Systems
- Reachout, #3(Dec'85) 43
- Reasonable & Commercial Sales address, #5(Feb'86) 31
- Rebates
  - how they work, #6(Mar'86) 3
  - which AMO gets yours, #1(Oct'85) 4
- Reboot last program used, #1(Oct'85) 16
- Recovering a disk, *see* Disks
- REFERENCE, by the author, #9(Jun'86) 32
- Rembrandt
  - different version for each computer model, #10(Jul'86) 5
  - with FLASHPRINT!!, #5(Feb'86) 49
  - Kaypro problems fixed, #10(Jul'86) 7
  - review, #4(Jan'86) 34
  - review reply, #6(Mar'86) 18
  - SUBMIT connects SuperCalc, #5(Feb'86) 43

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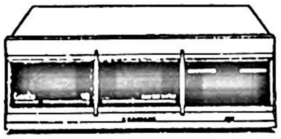

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Remote Systems
  auto logon for BAMDUA users, #3(Dec'85) 43
  MITE & MYTERM with CPM+, #12(Sep'86) 24
  software to communicate, #5(Feb'86) 10
Reset Osborne system parameters after disk change, #2(Nov'85) 6
Riteman, installing for WordStar, #9(Jun'86) 63
Rocky Mountain Systems address, #9(Jun'86)21

S

SBASIC, #9(Jun'86) 18
  creating Master Menu for Kaypro10, #9(Jun'86) 67
Scientific modeling, #6(Mar'86) 17
Screen control on Kaypro, #1(Oct'85) 58
Search, #9(Jun'86) 76
SETDEF.COM on the Executive, #2(Nov'85) 60
Shipping hints, #8(May'86) 18
SID, saving your changes, #4(Jan'86) 11
"Sidekick" for CP/M, #4(Jan'86) 73
Sideways printing, Twist & Shout, #8(May'86) 77
SKEYS reviewed, #2(Nov'85) 26
SmartBrain, *see* Outline processor
SmartKey, *see* Key redefinition
Softaid address, #10(Jul'86) 41
Software
  getting good buys, #4(Jan'86) 10
  reselling it, #4(Jan'86) 12, #8(May'86) 10
  what to look for when buying, #1(Oct'85) 7
Software Marketing Associates address, #7(Apr'86) 30
Software Research Technologies address, #7(Apr'86) 37, #11(Aug'86) 29
Software standards, #1(Oct'85) 10, #3(Dec'85) 10
Software Techniques address, #1(Oct'85) 61
SORT.COM reviewed, #2(Nov'85) 30
Sorting
  MBasic, #6(Mar'86) 59, 60, 61
  other programs will do it for you, #8(May'86) 19
Special Function Keys
  alternatives, #4(Jan'86) 10
  better definitions, #8(May'86) 14
  for Documate, #3(Dec'85) 57
  on Executive, #3(Dec'85) 57
  many programs work, #8(May'86) 52
  for MBasic, #3(Dec'85) 60
  for note taking with WordStar, #5(Feb'86) 15
  Osborne 1, #5(Feb'86) 63
  for SuperCalc, #5(Feb'86) 8
  to check disk space, #5(Feb'86) 54
  to run SETUP, #2(Nov'85) 6
  for window-like WordStar, #4(Jan'86) 18
  for WordStar, #3(Dec'85) 16, #5(Feb'86) 7
  see also Key redefinition
SPELL (response to Larsen complaints), #1(Oct'85) 7
Spelling checker
  Proofreader, #4(Jan'86) 6
  The Word Plus, #4(Jan'86) 21
  with WordStar, #2(Nov'85) 17
Squeeze/Unsqueeze, what is it, #5(Feb'86) 12
Standardization in Cooperative Databases
  alternatives, #3(Dec'85) 9
  PCFile, #1(Oct'85) 10
Starlet, *see* NEC 8401A
STAT, changing disk status, #7(Apr'86) 13
Statistical software
  four programs reviewed, #1(Oct'85) 22
  MEDSTAT reviewed, #4(Jan'86) 28
Statpac (Walonick version) reviewed, #1(Oct'85) 24
Statpak (NWA version) reviewed, #1(Oct'85) 27
Stock, MBasic program for charting performance, #6(Mar'86) 24
SUBMIT
  automate compiling your code, #8(May'86) 65
  needs final <cr>, #7(Apr'86) 13
  no problems with $, #5(Feb'86) 11
  printing with PIP, #6(Mar'86) 20
  a supeior replacement, #12(Sep'86) 8
SuperCalc
  adding printer codes, #8(May'86) 25
  aid to disk mapping, #3(Dec'85) 44
  books to get you started, #6(Mar'86) 53
  for cataloging disks, #2(Nov'85) 12
  compared to Lotus, #3(Dec'85) 44, #9(Jun'86) 6
  DATTIM creates clock, #10(Jul'86) 5
  eliminating signon message, #9(Jun'86) 27
  eXecute command, #7(Apr'86) 13, 51
    problems solved, #7(Apr'86) 8
  gaining more disk space, #2(Nov'85) 7
  Gantt chart displays, #7(Apr'86) 51
  on a hard disk, #4(Jan'86) 25
  keeping grade records, #2(Nov'85) 47
  large spreadsheets, #1(Oct'85) 11
  LOOKUP and IF, #9(Jun'86) 38
  mathematical functions, #8(May'86) 59
  mortgage amortization table, #10(Jul'86) 57
  Osmosis 80-column, *see* Osmosis
  page length, #11(Aug'86) 5
  printer control codes, #10(Jul'86) 58
  printing tips, #6(Mar'86) 54
  project management with, #2(Nov'85) 47, #7(Apr'86) 51, #9(Jun'86) 36
  repeat headings, #2(Nov'85) 45
  rounding changes, #11(Aug'86) 62
  sideways printing, #3(Dec'85) 48
  SIN and COS, #6(Mar'86) 16
  Special Function Keys, #5(Feb'86) 8
  SUBMIT connects Rembrandt, #5(Feb'86) 43
  Supersize on DriveC:, #8(May'86) 25
  template hints, #11(Aug'86) 62
  Trig functions, #7(Apr'86) 13, #9(Jun'86) 37
Superdex reviewed, #6(Mar'86) 31
SUPERZAP, modifys files, #5(Feb'86) 44
Surge protection, cheap source, #11(Aug'86) 37
Switchbox, Patchman, #3(Dec'85) 10
SYNONYM.COM, #1(Oct'85) 10
SYSTAT, Inc. address, #1(Oct'85) 28
Systat reviewed, #1(Oct'85) 28

T

Tax Reform Act of 1984 & your computer, #2(Nov'85) 20
Taxes, 1985 returns, #9(Jun'86) 19
TAXPAD '85, #9(Jun'86) 19
Telecommunications, the break signal, #6(Mar'86) 25
Televideo PT, as dumb terminal on Executive, #3(Dec'85) 55
Telex, RCA rules changed, #3(Dec'85) 12
Telion Software address, #9(Jun'86) 12
Text editor
  VDE-2CE, #11(Aug'86) 50
  VDO12 reviewed, #2(Nov'85) 30
Text retrieval programs, *see* data management
That Software Company address, #11(Aug'86) 24
The Elements of Friendly Software Design, #11(Aug'86) 27
The MBasic Handbook reviewed, #3(Dec'85) 20
The Programmer's Toolbox reviewed, #6(Mar'86) 27, #7(Apr'86) 24
The Word Plus, where to order, see Oasis Systems
Thought processors, *see* Outline processors
Torocomp address, #7(Apr'86) 65
Transferring files
  Epson Geneva (PX-8) & Executive, #10(Jul'86) 4
  Epson Geneva (PX-8) & Osborne 1, #2(Nov'85) 11, 40
  Epson HX-20 & Executive, #5(Feb'86) 6
  Epson HX-20 & Osborne 1, #11(Aug'86) 44
  NEC 8201A & Executive, #7(Apr'86) 74
  NEC 8201A & Osborne 1, #1(Oct'85) 32
  NEC 8401A Starlet & Executive, #5(Feb'86) 29
  NEC 8401A Starlet & Osborne 1, #5(Feb'86) 29
  TRS-80 model 100 & Osborne 1, #3(Dec'85) 48, #6(Mar'86) 74, #11(Aug'86) 42, #12(Sep'86) 40
Trantor, *see* WestWind
Trigonometric functions, with SuperCalc, #5(Feb'86) 66, #6(Mar'86) 16, #9(Jun'86) 37

TRS Model 4p with Montezuma CP/M 2.2
  compatibility of, #1(Oct'85) 20
  foreign disk formats, #1(Oct'85) 20
  upgrade, #9(Jun'86) 72
TRS Model 4p reviewed, #1(Oct'85) 19
TRS-80 model 100
  file transfers to Osborne 1, #3(Dec'85) 48, #6(Mar'86) 74, #11(Aug'86) 42, #12(Sep'86) 40
  hint for tape cassette storage, #3(Dec'85) 49
Turbo Pascal
  autoloading, #10(Jul'86) 7
  compiling for other computers, #9(Jun'86) 56
  contents of variables during debugging, #2(Nov'85) 7
  creating smaller programs, #10(Jul'86) 50
  cursor control for Osborne 1, #5(Feb'86) 65
  making program smaller, #5(Feb'86) 55
  "not enough memory" error, #9(Jun'86) 56
  program to print sideways, #3(Dec'85) 47
  reviewed, #10(Jul'86) 27
  a tutorial, #4(Jan'86) 6
Typesetting, with dBASE II, #8(May'86) 63

U

Understanding dBASE II reviewed, #1(Oct'85) 18
Unsqueezing files with USQ-19.COM, #1(Oct'85) 17
Updating membership datafile, #1(Oct'85) 4
Upgrade kit for MDT-20 terminal (Morrow), #1(Oct'85) 61
User areas
  change them with NewSWeeP, #9(Jun'86) 9
  how to use them, #7(Apr'86) 15
Using dBASE II reviewed, #7(Apr'86) 24

V

VDO12.COM reviewed, #2(Nov'85) 30
Velcro, keeping pieces together, #8(May'86) 23
Video *see* (Computer), monitor
Visual 1050
  compatability with Osborne 1, #7(Apr'86) 25
  reviewed, #7(Apr'86) 25
  users group address, #7(Apr'86) 26
Vixen
  with Anderson Jacobsen 831 printer, #1(Oct'85) 11
  AUTOST, #1(Oct'85) 31
  BDOS errors, #5(Feb'86) 11
  Centronics pinouts, #9(Jun'86) 66
  comments, #2(Nov'85) 14
  double sided problems, #8(May'86) 13
  hooking up printer, #6(Mar'86) 15
  installing Personal Pearl, #4(Jan'86) 16
  MAGICDIR works, #10(Jul'86) 10
  numeric pad (software), #8(May'86) 71
  reset (software & hardware), #1(Oct'85) 31
  reviewed, #4(Jan'86) 21
  size of CP/M enviorment, #5(Feb'86) 5
  special purpose disk, #1(Oct'85) 31
  special purpose disk & other comments, #10(Jul'86) 9
  startup hint, #12(Sep'86) 8
  SUBMIT, #1(Oct'85) 31
  updates, #11(Aug'86) 6

W

Walonick address, #1(Oct'85) 24
WD-40, removing from print head, #8(May'86) 50
WestWind
  bulletin board on line, #4(Jan'86) 74
  crash recovery, #7(Apr'86) 72
  hard disk installed, #4(Jan'86) 23
  network, #3(Dec'85) 56
  Web with extra dumb terminals, #3(Dec'85) 56
  Web reviewed, #11(Aug'86) 18
Windowing, MTBasic, #7(Apr'86) 32

Word processing
  additional tools, #11(Aug'86) 29
  help for better writing, #4(Jan'86) 20
  see also Magic Wand; NewWord; Perfect Writer; WordStar
WordStar
  <ESC> saves time, #12(Sep'86) 22
  ANYCODE patch, #8(May'86) 49
  automate your letters with PUNT, #8(May'86) 33
  avoid retyping, #3(Dec'85) 13
  for beginners, #3(Dec'85) 77
  bibliography, #5(Feb'86) 6
  block movements, #3(Dec'85) 14
    correction, #5(Feb'86) 70
  C.Itoh 8510 print codes, #3(Dec'85) 46
  changing
    default right margin, #8(May'86) 14
    disks, #7(Apr'86) 14
    line height, #9(Jun'86) 25
    printer codes, #6(Mar'86) 45
    WSMSGS.OVR with DU, #3(Dec'85) 61
  compared to NewWord, #4(Jan'86) 35
    correction, #6(Mar'86) 76
  configuring Osborne arrow keys, #4(Jan'86) 45
  continuous underlining, #4(Jan'86) 43, #8(May'86) 48
  creating
    boxes around text, #1(Oct'85) 38
      correction, #3(Dec'85) 12
    a datafile with MailMerge, #2(Nov'85) 33
    fancy labels, #4(Jan'86) 57
    form letters, #1(Oct'85) 16
    a reference list, #5(Feb'86) 6
  creating backups on alternate disk, #8(May'86) 25
  ^PH on non-backspacing printers, #10(Jul'86) 5
  ^PX for underline, #5(Feb'86) 13
  ^QP saves time, #12(Sep'86) 20
  ^Y^Y for line deleting, #9(Jun'86) 6
  data from Personal Pearl, #2(Nov'85) 45
  dating your letters automatically, #4(Jan'86) 55
  delays changed, #11(Aug'86) 37
  deleting .BAK files, #8(May'86) 18, #10(Jul'86) 13
  DISK FULL recovery, #7(Apr'86) 12
  with DriveC:, #8(May'86 25
  editing files from other programs, #6(Mar'86) 10
  eliminating .BAK files, #2(Nov'85) 7
  eliminating "high-order" bit, #1(Oct'85) 39
  on Epson Geneva (PX-8), #2(Nov'85) 11, #9(Jun'86) 72
  filenames reduce .BAK files, #11(Aug'86) 8
  find & replace, #11(Aug'86) 29, #12(Sep'86) 22
  finding control characters, #7(Apr'86) 34
  finding pairs, #2(Nov'85) 6
  finding underlines, #5(Feb'86) 13
  flag characters moved, #11(Aug'86) 37
  footnote programs compared, #5(Feb'86) 33
  footnote software revisited, #6(Mar'86) 7
  format file for patent applications, #4(Jan'86) 50
  format files speed output, #4(Jan'86) 54
  gaining more disk space, #2(Nov'85) 7
  Gemini 10X installed, #11(Aug'86) 48
  Getting the Most From WordStar and MailMerge, #4(Jan'86) 55, #11(Aug'86) 26
  getting started, #9(Jun'86) 29
  global reformatting, #11(Aug'86) 29
  graphs and graphics, #5(Feb'86) 49
  hard carriage returns, #11(Aug'86) 29
  on a hard disk, #4(Jan'86) 25
  headings, centered with alternating page numbers, #9(Jun'86) 30
  help with obscure features, #4(Jan'86) 20
  hyphens
    hard, #7(Apr'86) 48
    soft, #7(Apr'86) 48
  indenting made simple, #8(May'86) 57
  indexing, #6(Mar'86) 31
  with INOVA 500 on Executive, #7(Apr'86) 75
  installed for Okidata ML92, #9(Jun'86) 65
  installed for Riteman & Zorba, #9(Jun'86) 63

WordStar (continued)
- installing with Epson NLQ upgrade, #12(Sep'86) 41
- installing Olympia RO daisywheel, #6(Mar'86) 15
- interfacing printers, #8(May'86) 43
  - correction, #12(Sep'86) 8
- with KAMAS, #4(Jan'86) 52
- labels, #7(Apr'86) 12
- long lines slow it down, #10(Jul'86) 5
- macros save time, #8(May'86) 52
- marking blocks, #2(Nov'85) 19
- marking place, #12(Sep'86) 22
- memory-mapped video on Osborne 1, #5(Feb'86) 51
- merging data files, #9(Jun'86) 48
- merging files, #7(Apr'86) 14
- multiple .COM files for multiple uses, #3(Dec'85) 54
- needs final <cr>, #7(Apr'86) 13
- optimizing print control features, #3(Dec'85) 46
- Osborne 1 blinking cursor, #2(Nov'85) 40
- overprinted lines, #7(Apr'86) 61
- padding text lines to fixed length, #1(Oct'85) 38
- page headings, #8(May'86) 18
- page number alternated, #9(Jun'86) 30
- page numbering, #11(Aug'86) 29
- patch conflicts, #8(May'86) 46
- patching
  - for ^Y^Y to delete line, #4(Jan'86) 69
  - with DDT, #4(Jan'86) 4
  - with EDFILE, #7(Apr'86) 7
  - for Osmosis 80 column board, #4(Jan'86) 45
  - for printer control codes, #3(Dec'85) 53
  - with SID, #4(Jan'86) 44
- place markers, #8(May'86) 14
- and print buffers, #5(Feb'86) 11
- print control with ANYCODE, #3(Dec'85)76
- print multiple copies, #9(Jun'86) 34
- print spooling, #8(May'86) 43
- print as you edit, #4(Jan'86) 14
- printer
  - codes on ^P menu, #3(Dec'85) 61
  - control as you boot, #7(Apr'86) 21
  - initialization, #6(Mar'86) 9
  - interfacing, #8(May'86) 43
  - options added, #10(Jul'86) 49
  - patches ver 3.3 Osborne 1 & TI/855, #1(Oct'85) 8
- printing
  - any character, #12(Sep'86) 26
  - in columns, #6(Mar'86) 45
  - file to screen, #1(Oct'85), 39
    - correction, #9(Jun'86) 75
  - hints, #12(Sep'86) 22
  - multiple copies, #12(Sep'86) 23
  - to include a graph, #3(Dec'85) 8
- proportional printing, #5(Feb'86) 14, #7(Apr'86) 48, #7(Apr'86) 50
- PUNT automates your letters, #4(Jan'86) 72
- record keeping, #10(Jul'86) 45
- removing eighth bit, #11(Aug'86) 7
- renaming WS.COM, #4(Jan'86) 10
- repeat key, #8(May'86) 57
- replacing carriage returns, #6(Mar'86) 10
- reverse video & fast scrolling, #7(Apr'86) 6
- right justify proportional text, #5(Feb'86) 49
- ruler line changes, #8(May'86) 57
- R(un) command, #2(Nov'85) 10, #4(Jan'86) 6, #12(Sep'86) 20, #12(Sep'86) 22
  - on the Executive, #3(Dec'85) 8
  - option problems solved, #10(Jul'86) 48
  - to check disk space, #5(Feb'86) 54
- run on remote dumb terminal, #3(Dec'85) 56
- search & replace, #10(Jul'86) 47
- search for ^PS, #5(Feb'86) 13
- setting 12cpi as default, #5(Feb'86) 6
- soft hyphen is 1Eh, #7(Apr'86) 10
- sorting directory, #10(Jul'86) 5

WordStar (continued)
- Special Function Keys, #5(Feb'86) 7, #7(Apr'86) 11
  - SmartKey II, #6(Mar'86) 43
  - to sort notes, #5(Feb'86) 15
- speeding it up, #2(Nov'85) 12, #4(Jan'86) 44, #7(Apr'86) 37, #8(May'86) 56, #12(Sep'86) 22
- speeding up caution, #11(Aug'86) 37
- spelling option, #2(Nov'85) 17
- suggestions for greater use, #4(Jan'86) 55
- supressing hyphenation, #4(Jan'86) 44
- swapping disks, #11(Aug'86) 6
- swapping disks during R(un) command, #4(Jan'86) 6
- transposed letters fixed, #8(May'86) 52
- two column printing simplified, #7(Apr'86) 7
- two column printing with ver.2.26, #2(Nov'85) 32
- undelete function, #9(Jun'86) 34
- underlining with dot matrix printer, #8(May'86) 48
- underscoring tip, #10(Jul'86) 47
- UNDO key, #9(Jun'86) 34
- using spelling option for other programs, #2(Nov'85) 17, #7(Apr'86) 5
- ver. 3.3 memory mapped video, #11(Aug'86) 6
- ver. 3.3 User Patch area, #7(Apr'86) 37
- window-like operation, #4(Jan'86) 18
- writing in Spanish, #6(Mar'86) 17
- *see also* MailMerge

WRAM, address, #3(Dec'85) 10
Writing Consultants address, #7(Apr'86) 50
Writing without word processing, #8(May'86) 19

X

Xpert Software address, #11(Aug'86) 5
Xpert Software phone number, #5(Feb'86) 20
XtraKey, one hand computing, #11(Aug'86) 5

Z

Zorba
- 110V to 220V, #8(May'86) 74
- BIOS notes, #11(Aug'86) 45
- changing the cursor, #12(Sep'86) 37
- cursor control codes, #9(Jun'86) 54
- drive maintenance, #12(Sep'86) 41
- external monitors, #12(Sep'86) 46
- modifying the BIOS, #7(Apr'86) 70
- with Riteman printer, #9(Jun'86) 63
- video control, #10(Jul'86) 52
- wordwrap added, #11(Aug'86) 47

Zorba Information Exchange address, #9(Jun'86) 66

* * * * * * *

ADVERTISER LIST

InterconnectCo	p 6
Dave Blair	p43
FOG Christmas Special	p 7
Intersecting Concepts	p44
J&D Associates	p40
Mentzer Computer Systems	p59
Mission Peak Systems	p50
Nantucket Corporation	p9
Nuevo Electronics Corp	p27
Public Domain Software	p38
SLR Systems	p17
Spectre Technologies	p35
Spite Software	p10 – 12
Sudden Products	p15
Telion Software	p23
WestWind Computers	p33, 55
Wizard of OsZ	p39
Worswick Industries, Inc.	p49

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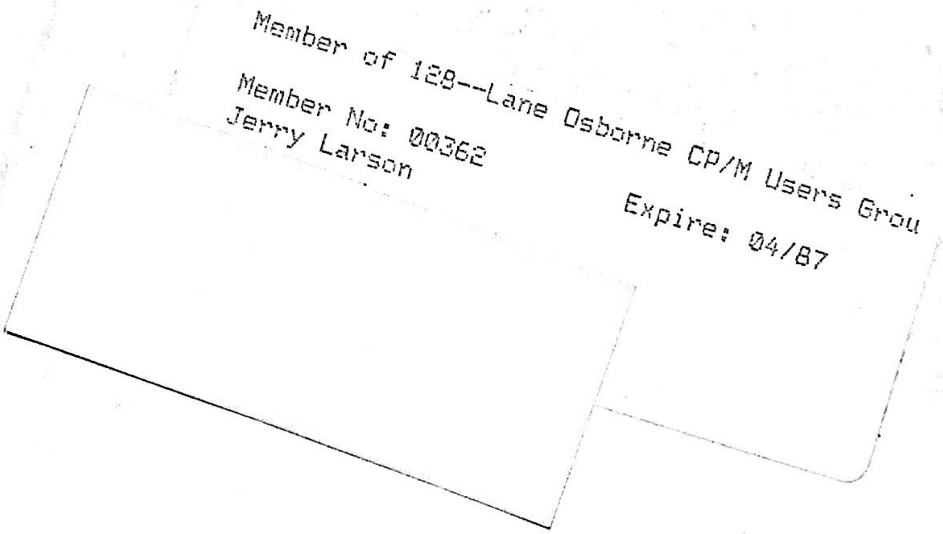

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